THE BUILDER
A JOURNAL FOR THE ARCHITECT & CONSTRUCTOR

VOL. CXL. APRIL 17, 1931. No. 4602.

New Head Office of the Midland Bank, Ltd., Poultry, E.C.: Principal Entrance.

MESSRS. GOTCH & SAUNDERS (LAURENCE M. GOTCH, F.R.I.B.A.) with SIR EDWIN LUTYENS, R.A., Architects.

(*See page* 720.)

MEETINGS

FRIDAY, *April* 17.

National Institute of Industrial Psychology. Annual General Meeting. At Burlington House, Piccadilly, W. 5 p.m.

Royal Sanitary Institute. Mr. E. J. Goodacre on "Some Aspects of Municipal Sanitation." At the Guildhall, Poole. 5 p.m.

Institution of Mechanical Engineers. Mr. C. D. Gibb on "Post War Land Turbine Development." 6 p.m.

Institution of Municipal and County Engineers. North-Western District Meeting. At Manchester. 9.30 a.m.

Westminster City Council. Opening of Marshall-street Baths. 3 p.m.

London Society. Dr. Dan McKenzie on "Noise." 5 p.m.

SATURDAY, *April* 18.

Institution of Municipal and County Engineers. Meeting of the Yorkshire District. At Sowerby Bridge. 2 p.m.

Berks, Bucks and Oxon Architectural Association. Annual General Meeting. At University College, Oxford. 2.45 p.m.

TUESDAY, *April* 21.

Royal Institute of British Architects. Opening by Mr. H. G. Wells of an Exhibition of "Architecture of Modern Transport." 3 p.m.

Builders' Clerks' Benevolent Institution. Annual Dinner. At the Holborn Restaurant, W.C.1. 6.30 p.m.

Illuminating Engineering Society. Mr. W. Grant Mackenzie on "Some Aspects of Street Lighting in the United States." At 18, John-street, W.C.2. 7.30 p.m.

WEDNESDAY, *April* 22.

Regent Polytechnic. Mr. C. W. Glover on "Acoustic Construction." 7.30 p.m.

Institute of Fuel (Midland Section). Mr. A. Marsh on "The Smoke Problem: a Consideration of some of its Economic Aspects and the Difficulties of its Solution." At Birmingham. 6.15 p.m.

THURSDAY, *April* 23.

West Yorkshire Society of Architects. Annual General Meeting. At Leeds. 7 p.m.

WEDNESDAY-THURSDAY, *April* 22 *and* 23.

Garden Cities and Town Planning Association. Visit to Slum Clearance and Housing Schemes in London.

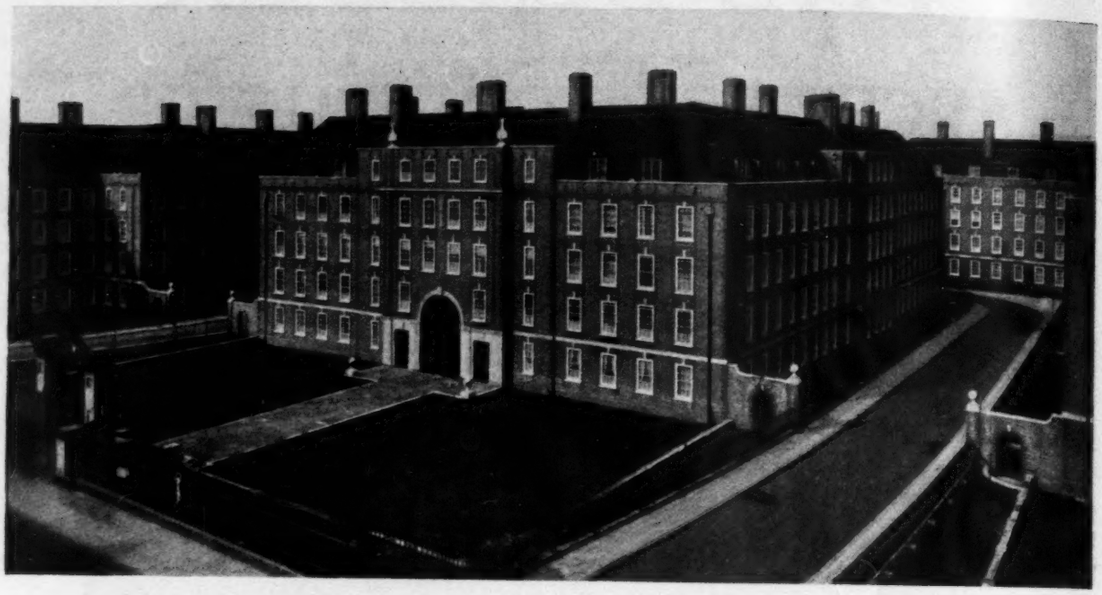
FRIDAY, *April* 24.

Town Planning Institute. Captain R. Ronald Henderson on "Rural Preservation and the Landowner." 6 p.m.

MONDAY, *April* 27.

Royal Institute of British Architects. Mr. Maxwell Ayrton on "Modern Bridges." 8 p.m.

Architectural Association. Mr. H. Th. Wijdeveld on "Problems in Modern Architecture." 7.30 p.m.



General View.

View inside Courtyard from First-floor Balcony, looking North.

The London County Council East Hill Estate, Wandsworth: "Newlyn House."

Mr. G. Topham Forrest, F.R.I.B.A., Superintending Architect to the L.C.C.

(*See page* 704)

SPRING CLEANING

WE remember some time ago talking to a professional colleague who was in the midst of a continuously busy spell of work which had been going on for some years. His office was even more untidy than usual for an architect's office, and there was generally an air of harassed cheerfulness about the place, shared by principal and staff alike. In the course of a stolen conversation he confided in us that he almost longed for a slack period during which he could at leisure bring a little order into the chaos which prosperity had brought him.

We suppose we all dream of similar activities when times are most pressing, and see ourselves ready equipped for the next time that business presses. A reorganised filing system; a new index or two; an album for those illustrations out of *The Builder* which we know will be so useful in times ahead, but which we cannot always find when we most need them; a general burn-up of lumber and "junk"; and an automatic system whereby such things find the dustbin at regular stated intervals. These are things we have all determined to do, but rarely do: first, because we have not the time, and then, when that excuse has passed, because we have become depressed by slackness, and have lost the necessary enthusiasm. At home, we find the spring cleaning done for us, whatever else befalls, but at the office the time never comes, for lack of a systematic habit.

Dwelling thus upon the state of the man-inhabited castle—for the lady practitioner has invaded but the fringe of that realm—we may well consider whether the same quality of reluctance to sweep out and burn is not responsible for many of the anachronisms which still cumber the progress of industry. Rationalisation is the name by which the spring cleaning of industry has been christened very aptly, for the move stands first and foremost as a matter of common sense. And it would seem that industry has arrived at the very stage for which our professional friend yearned during which business is at its slackest and energies could be devoted without fear of interruption to the progress of a thorough "clean-up." We are not at all sure that the period is being used to the best advantage, and we may well wonder whether trade depression has not become reflected in a moral depression, out of which industry finds itself hard to awaken to reorganise.

We published in our last number a most interesting letter from a well-known surveyor, who analyses at some length the charge which has been frequently made that the building industry is a mass of disorganisation. He examines the question whether the existence of countless small jobbing firms is admissible in a well-organised industry, and confesses to a dislike of the idea of their absorption into bigger firms or their combining into a syndicate. He considers whether the adoption of modernised machinery might not be more general, without arriving at any definite conclusion as to whether there is a serious defect in that direction, and he comes to the conclusion that the costing systems of the average big firm in this country are as good as any in Europe, and probably as good as any in the world. On the balance generally, he finds that the charge of serious disorganisation in the building industry in this country is not based upon fact, and we agree with him. Building is such a complicated process, and the growth of a building is of necessity so slow in appeal to the eye, that the industry makes a likely target for the armchair critic to aim at.

We make this reservation, however, that there is no industry in the world so perfect that it cannot be improved, and we suggest that now is the time in which we should endeavour to get rid of all that hinders, and graft on all that is likely to help. It is only by such means that we shall be able to look back upon this prolonged period of trade depression as anything but a nightmare with no pleasant relief. We admit to a great deal of highly organised and eminently satisfactory characteristics in the industry as we find it to-day, but we urge for a continued effort to make it a more perfect instrument, ready to cope with the boom which must surely come, and possibly sooner than we expect in our most sanguine moments.

No builder can pride himself as being part of a well-organised scheme unless he himself knows just what he is doing, and how he stands when he has done it. We ask our builder readers to ask themselves whether they have every confidence in their tendering, and whether they know exactly at the end of the financial year which of their jobs have paid and which have not. By far the greater proportion will be able to answer at once that they are safe upon both these points; but we know that there will be some who cannot honestly say the same. With these, tendering may be largely a matter of guess-work, and losses are carried on from job to job, so long as there remains a balance in the bank, or as long as credit holds good with the local bank manager.

To such as these the day of reckoning is inevitable, and the wonder is that the lesson has not been learned long ago.

No business of the kind can be said to be organised unless every squad of men know with certainty their job for the morrow, and find the job sufficient and everything there for their use without waiting or going slow. With most businesses this is actually the case, but we should be surprised if there were not many which did not answer to the test. We recently saw on a job of quite moderate dimensions, a schedule programme of work for the whole course of the job for all trades. The programme was posted up for all and sundry to see, and we were told that there became quite a sporting spirit among the building staff in an effort to beat the schedule, and that at the stage at which we found it the schedule had been adhered to almost to a day in all trades. We should like to feel that there was more of this spirit abroad in the smaller building works, which form the greater part of the building activity in the country. We know that this sort of thing is comparatively common in the larger works in London, and the great cities of the Provinces, but we are not conscious of the same spirit elsewhere.

Again, we have a suspicion that among some businesses, an excellent estimating department has been allowed to drift into habits of rule of thumb, which do not move with the market. Every drop in prices should be reflected in the rates upon which tenders are based, and yet we cannot always feel that this is the case. We read of substantial falls in price of some of the bulk items in building material and we sometimes look in vain for a proportional drop in the tenders for current work. The estimating department should be always alive to the movement of the market, and unless that is the case, tendering will become as unreliable from the organised department as from the guesswork of some of the small jobbing builders.

While on the subject of estimating, we may remark upon a custom which, according to a correspondent, appears to be very prevalent in the trade. He writes:—"The estimating department provides a detailed tender based on rates accepted in the office as representative of the business and the market, and the master builder then lops off a more or less arbitrary sum, if business is keen at the time. This is the wrong end at which to work, and I consider that the only item which the master builder should feel justified in revising, provided he has built up a reliable estimating department, is the rate of profit. Upon this he is entitled to say that he is willing to work to a low percentage of profit, or even, on occasion, for no profit at all, but the cutting off of a lump sum may degenerate in time, in rivalry with other firms who are treating the matter in a similar way, into a dangerous and confusing habit. I should suggest, in such cases, a stiffening up of the estimating department, and the resolve to trust to their work."

We should also suggest a more general liaison between the estimating and prime cost departments, in the way of an exchange of experience. We know that it is common to keep these departments quite distinct, and even to discourage intercommunication between them; but whereas that may be excellent for most purposes, the testing of conjecture with fact must be of value from time to time, and it is a test which the master man cannot always make to the full.

The modernising of plant and equipment is such an obvious step in reorganisation that we need say no more than suggest that now is the time to do it.

NOTES

The R.I.B.A.

We understand that the Council of the R.I.B.A. has decided to nominate as President for the session 1931–32, Dr. Raymond Unwin, and that this fact will be communicated when the voting papers are issued on May 16. Dr. Unwin's name is well known to the public as joint architect for Letchworth and Hampstead Garden Suburb, and as a town planner of eminence. He is at present Director of the Greater London Regional Planning Committee and President of the International Federation for Housing and Town Planning. He was one of the founders of the Town Planning Institute.

Home-made Building.

It is interesting and perhaps instructive and amusing to hear, according to the daily papers, that Miss Duckham is erecting (with, of course, the help of direct labour) a house for her own occupation, from the design of her sister. The erection of a house in these days appears to some people to be so simple that no training in design and execution is necessary, but most of our best architects have served long apprenticeship or have attended some architectural school for their training; but training, like tradition, would appear to be unnecessary in this age. We may admire this lady's enterprise, and when the house is completed we hope to express our admiration again. The preparation of plans, working drawings, details, drainage schemes, etc., for such a job, and for the local authority, are supposed to require some technical knowledge. Of course much ready-made joinery is on the market in these days, and is largely used in speculative work, and this might be helpful, but where cost is a consideration and completion of work to time is necessary, tenders from reputable builders have been shown by experience to be more satisfactory than ordinary work. The experience in building work, even for a house, cannot be gained without training, and we wonder whether, in this case as in others, the talented lady has the help of an experienced clerk of work.

The Amateur Architect.

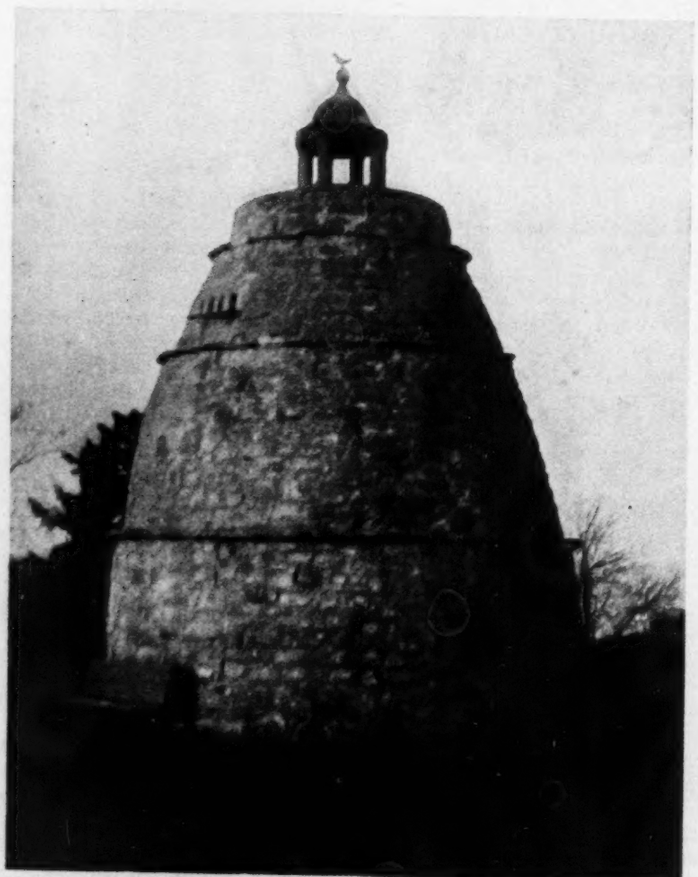
A correspondent writing to us on this subject says: "I think it would be interesting to have further details of this house. What has been stated is very misleading to the public, and this amateur business should be discouraged. We read so much of the house that Jill built, the house that Jack built, the house that Miss Duckham built, and little of what the architect does. Recently an official architect took exception to a criticism in your correspondence columns. It is not official architects, but assistants in public offices, or their friends and relations, who take money from the architect. I know three who are continually doing it and are employed in large public offices."

The Preservation of Rural Scotland.

The annual report for 1931 of the Association for the Preservation of Rural Scotland is a record of good work by an active society which has the support of an influential Council and a number of interested Scottish societies. During the past year two branches of the Association have been established, one in Stirlingshire and the other in Galloway, and we note that it is the desire of the Association to establish branches throughout Scotland, for the excellent reason that "the organisation of well-informed public opinion is one of the best safeguards we can have in conserving the unique charm of our Scottish countryside in Highlands and Lowlands alike." The strength of any preservation of the countryside movement must depend on public opinion, and when once the public conscience is aroused, as it surely can be by the work of these societies, we may reasonably expect the repression of much thoughtless destruction and spoliation which now goes on in our towns and villages and countryside.

Scottish Ancient Monuments.

Of more immediate interest to our readers we take the following remarks from the Report on the work of the Ancient Monuments Committee for 1930. "During the past year the scope of the Ancient Monuments Committee's activities has been greatly enlarged. It has received intimation from all parts of the country of cases of vandalism and neglect. Ninety-one cases have been reported and twenty-eight monuments have been visited and reported on by members of this Committee. In many cases plans, sketches, and photographs have been made as records, and over three hundred letters have been written to owners, agents town clerks and other authorities acting as trustees of subjects dealt with. . . . The subjects include: Castles, abbeys, churches, forts, bridges, memorials, dovecots and other forms of historic monuments liable to be neglected, many of which have been recommended for scheduling under the Ancient Monuments Act. Several of the Border Keeps have been surveyed and photographed. Mungo Park's Cottage and Deuchar Bridge are to be repaired during this coming summer under the patronage of the Association and the supervision of members of the Ancient Monuments Committee. The agent of the owner of the old dovecot at Prestonpans has promised to carry out the repairs recommended by this Committee. The old dovecot at Linlithgow has been successfully repaired and preserved on the recommendations of a member of this



From the A.P.R.S. Annual Report. Photo: W. H. Johnson.

An Old Scottish Dovecot at Linlithgow.

[Repaired by the Town Council under the advice of the Ancient Monuments Committee of the Association for the Preservation of Rural Scotland.]

Committee. Much useful work has been done and many of the cases under consideration will be dealt with as opportunity arises. Considerable attention has been given to cases such as Lindores Abbey, Clatchard Craig Fort, Muthill Church, and Newark Castle, which, in the opinion of this Committee, should be secured for the nation either as scheduled monuments or by some other means which would ensure their preservation. All cases of neglect or vandalism should be reported to Mr. William Davidson, F.R.I.B.A., 2, Coates-crescent, Edinburgh, who is continuing to act as Chairman of a most enthusiastic Committee."

Travel in Italy.

We are always ready to hear something new about foreign travel, and the following should be of interest to many of our readers. The Italian Government, five years ago, opened at the Royal University for Foreigners at Perugia a unique opportunity to professional men and women (and others) of limited means and leisure whereby they may learn easily in the most inspiring surroundings more in a month than could be gathered in years of hard grind at home of Italian art, literature, Etruscology, culture, philosophy, etc. The University is open through July, August and September. Lectures are given in all these subjects; the language is taught in classes of three grades; students may join for one, two or three months. Examinations are held; 2nd grade for a certificate of knowledge of, and advanced grade for a diploma as a teacher of, the Italian language. By the generosity of the Italian Government, students may take six journeys on the Italian States Railways at 30 per cent. reduction, and are also conducted in parties to many places of interest, with special privileges. The cost is minimised. Apart from the return fare, which works out at about £11 second and £7 third class, residence in Perugia can cost per month, £5 to £6 at the University hostel; £7 to £9 in a family; £6 to £16 at an hotel. (Approximate but reliable figures.) University fees are (approximately) £1 to £2 10s. for one month, less for succeeding months, according to the number of lectures attended. Full and exact particulars may be obtained from the Secretary, Royal University for Foreigners, Perugia, Italy.

Brickwork and Masonry.

The 1930-31 programme of the City and Guilds of London Institute contains the information that this Institute, through its Department of Technology, holds examinations in upwards of one hundred technological subjects. In regard to its examinations in brickwork and masonry the Institute is advised, as in many other subjects, by a representative Advisory Committee, and upon the recommendation of the Advisory Committee the Institute has adopted for publication in the Department's Programme for next session revised preambles and syllabuses in both subjects, to come into force with the examinations of 1932. These preambles we hope to notice in an early issue. The Advisory Committee and the Institute authorities are anxious that the attention of young persons engaged in, or about to enter, the building trade should be directed to the benefit that they would gain from a progressive course of study in the technical subjects and science allied thereto, such as is required to lead up to the Institute's examinations. Under an agreement come to with the Board of Education for England and Wales some years ago, the City and Guilds of London Institute is only holding in those countries the Final Grade of the examinations in Brickwork and Masonry. The question of the holding of Intermediate Examinations in the subjects in England and Wales has been recently under consideration. The Intermediate Examinations are open to candidates in Scotland and Ireland.

The London County Council East Hill Estate, Wandsworth: Archway to Courtyard of "Newlyn House."

Mr. G. Topham Forrest, F.R.I.B.A., Superintending Architect to the L.C.C.

Building and Inland Revenue.

The 73rd Report of the Commissioners of H.M. Inland Revenue, for the year ending March 31, 1930, shows that the gross income in 1928-29, as shown by assessments, from the ownership of lands, houses, etc., in Great Britain and Northern Ireland, was £414,287,921, and the actual income (gross income less exemption, repairs, etc.) £254,107,794, of which England provides £234 millions. A table showing the classification by counties of new buildings assessed to income tax, completed in the year ended Michaelmas, 1929, is also given, from which some interesting facts emerge. Not unnaturally, the highest group of totals are in the home counties and London. London County provides £921,091; Middlesex, £1,062,260; Surrey, £634,313; Kent, £458,487; and Essex, £506,436. In the provinces Lancashire comes top with £692,103, Yorkshire next with £565,303, and Warwickshire third with £401,719. Lanarkshire, £226,034, leads in Scotland. While throughout the area £1,526,773 was provided by factories and industry, only £10,936 was afforded by farmhouses and farm buildings. Places of entertainment were assessed at £182,488, compared with £136,453 for 1928-29, and £80,068 for 1925-26. The assessment on dwellings and flats, £6,340,951, on 205,842 dwellings, shows a slight decrease over 1928-29, £6,498,773 on 215,318 dwellings. The grand total, £9,012,031, for 239,780 premises of all kinds, as compared with the figures for 1928-29, is £323,700 up, but 13,068 down in total number of premises.

L.C.C. Housing Work.

There was a very full attendance at Monday evening's meeting of the R.I.B.A., when Mr. G. G. Wornum read a paper on "Modern Flats." The lecturer confined himself largely to the work of the London County Council; and after all the enthusiastic praise of Continental housing which we have had within recent years, it was refreshing to hear the lecturer assert, in effect, that the L.C.C. standard of working-class housing is the best in the world. The following piquant incident, mentioned by the lecturer, deserves special notice. He was told, he said, that a short while ago a member of the L.C.C. Housing Committee complained to the Architect's Department that Vienna had gone so far ahead of us. The member showed a plan and photo of a Viennese block. The architect identified the plan as being one sent by the L.C.C. to Vienna 30 years ago!

GENERAL NEWS

The late J. H. Nicholson.

Mr. John Hedley Nicholson, of Oxford-road, Middlesbrough, the resident engineer for the Tees-Newport bridge being erected by Messrs. Dorman, Long & Co., died at Stockton Hospital following a motor accident. Mr. Nicholson, who was for many years associated with the firm of Sir William Arrol, was the engineer for the new Sunderland bridge.

Proposed Control of Buildings, Coulsdon.

Coulsdon and Purley U.D.C. recommend that the President of the Royal Institute of British Architects and the President of the Surveyors' Institution be requested each to nominate one Fellow to serve upon the Advisory Committee, to exercise powers under Section 33 of the Town Planning Scheme relating to elevations of buildings, and that the Council proceed to nominate a Justice of the Peace for the same purpose.

A Lecture on London.

A lecture was given on April 8, at the University of Strasbourg, on "The London of To day," by Mr. B. S. Townroe. We are informed that among the buildings shown, in which the French students took a special interest, were those which had received the Gold Medal as being the buildings of the year. Many of the students declared afterwards that they were unaware that London had so much to offer in architectural development and advance.

New Hall and Institute for Meikleour.

With the view of meeting the needs of the public and social life of Meikleour (Perthshire), his home and village, a hall and institute have been gifted by Sir James Carmichael, of London. The opening ceremony was performed on Saturday by Lady Violet Astor. The hall itself is capable of holding over 200 people. In accordance with the donor's wishes the buildings have been designed to harmonise as far as possible with the simple architecture of the village. Messrs. Smart, Stewart & Mitchell, Perth, are the architects.

The Acoustics of the Law Courts.

Two microphones have been installed in the Divorce Court—in the court over which Lord Merrivale presides. One is fixed in front of the President's seat and the other on the ledge of the witness box. This is an experiment to see if the acoustics of the court can be improved. The difficulty of hearing—witnesses in particular—has been more evident in the divorce courts than in the older courts, and the erection some time ago of a sound-board over the witness box in the President's court has not proved a success. If the latest experiment is successful it is probable that most of the courts will be fitted with microphones.

Chiswick Bridge Problem.

It is feared, says the *Morning Post*, that the piles which have been driven into the bed of the River Thames in connection with the work of rebuilding Chiswick Bridge, will be a source of danger to river traffic next summer and in 1932. The piles create currents which may cause trouble at this part of the river where, in normal conditions, much experience is needed for the safe navigation of craft. Parts of the shore abutments have already been put in, and work in mid-stream is being carried on by means of piles and a number of enormous cranes. The bridge is being constructed in reinforced concrete; some of the Portland stone, with which it is to be faced, has already been brought to the riverside ready to be put in position.

John Constable Centenary.

The residents of Hampstead are anxious that the fame of Keats shall not overshadow that of other men of genius associated with the "evergreen hill," especially the painter, John Constable, whose centenary is in 1937. He lived at Hampstead for many years, and is buried in the parish churchyard. The tomb is sadly damaged, and discoloured by time and the weather, and whatever is done for the renewal of the monument must include the resurfacing of the panels and the regraving of all the script. It is hoped that the Hampstead Antiquarian and Historical Society, who have been responsible for most of the commemorative tablets in the district, will take the matter in hand.

Public Health : R.S.I. Congress.

The forty-second congress of the Royal Sanitary Institute will take place at Glasgow from July 4 to 11 next, under the presidency of Sir Henry Mechan, D.L., LL.D. In the large field covered by the work of the congress occurs :—Hospitals, planning and construction; Provision and planning of working-class dwellings; Clyde Valley regional planning scheme; Housing; Slum clearances; Discharge of sewage into sea; Municipal engineering and its implications; and Single pipe drainage. An attendance of about 1,400, consisting of delegates, members of the Institute, and visitors, is expected. A large health exhibition has been arranged in connection with the congress, which will include such exhibits as household and kitchen appliances, hospital appliances, sewage disposal apparatus, refrigerators, gas stoves and fittings, disinfectants and disinfecting apparatus, soap and sanitary appliances, etc.

International Housing Congress.

The International Federation for Housing and Town Planning is holding its 13th International Housing and Town Planning Congress in Berlin from June 1 to 5. At the same time there will be a great German building exhibition, one of the largest held for many years. An important section of this will be the International Housing and Town Planning Exhibition, in the organisation of which the Federation has given its whole-hearted co-operation. The two main subjects for discussion at the Congress will be : The Abolition of Slums, and the Traffic Problem in Relation to Town and Regional Planning. The reports from Great Britain will be presented by Mr. Frank Hunt, C.V.O., chief valuer to the London County Council; Mr. Frank Pick, managing director to the Underground Group, London; and Mr. G. L. Pepler, F.S.I., past-president of the Town Planning Institute, London. During the Congress there will be visits to housing schemes in Berlin and Potsdam. After the Congress visits will be made to the Spreewald, Dresden, Hamburg and Essen. The National Housing and Town Planning Council is arranging for a party of British delegates to leave London on Friday, May 29. Full particulars of the Congress can be obtained from the International Federation for Housing and Town Planning, 25, Bedford-row, W.C.1.

COMPETITION NEWS

The R.I.B.A. New Premises Competition.

We gave in our last issue a summary of the conditions in this competition, from which the following details of accommodation were accidentally omitted :—

		sq. ft.
(A)	President's Room ...	400
	Secretary's Room ...	400
	Room for Secretary's Clerk	150
	Assistant-Secretary's Room...	250

en suite

Wesleyan Methodist Church, Church Halls and Schools, Friern Barnet.

In a limited competition for the proposed new Friern Barnet Wesleyan Methodist Church, Church Halls and Schools, at the corner of Friern-lane and Torrington Park, the plans submitted under the nom-de-plume of "Apropos," by Messrs. G. Reginald Farrow, F.R.I.B.A., and Sydney R. Turner, of Amberley House, Norfolk-street, Strand, have been placed first, and the trustees have decided to recommend to the quarterly meeting of the Highgate Circuit the acceptance of the scheme.

Dorman Long Travelling Scholarship.

Particulars have just been drawn up by the Institution of Structural Engineers of this year's competition for the Dorman, Long Travelling Scholarship. The scholarship was founded for the purpose of encouraging and developing knowledge in Great Britain of steel frame construction, and to provide an opportunity for travel and study. Candidates, who must be members of the Institution, and under 30 years of age, will, at the examinations to be held at a number of centres on June 20, be given a set of framing plans, and a pillar schedule, such as are usually supplied by consulting structural engineers, and they will be required to provide shop detail drawings, mill order sheets, specification, and cutting lists for the members marked on the plans. The sitting will be followed by a period of 21 days, during which candidates will have to make and submit finished drawings and lists. The winning candidate will be awarded a gold medal and £300, and will be required to travel to Canada and study building conditions in that country. Full details are obtainable from Major R. F. Maitland, O.B.E., Secretary, 10, Upper Belgrave-street, S.W.1.

COMPETITIONS OPEN.

	Particulars published in "Builder."	Sending in date
Proposed Isolation Hospital, Pinley, for Coventry T.C. Premiums £300, £200, £100. Mr. E. Stanley Hall, F.R.I.B.A., assessor. Conditions from the Town Clerk, Coventry. Dep. £1 1s.	Jan. 2	April 30
8th Annual Competitions, Royal Society of Arts, scholarships and prizes of £1,600. Details from Secretary, R.S.A., John-st., Adelphi, W.C.2.	Feb. 2	May 22
New Council school for 880 children at Blower's Green, for Dudley E.A. Mr. P. T. Buckland, F.R.I.B.A., assessor. Conditions from Mr. J. Whaley, Director of Education, Dudley. Dep. £1. Local architects only	Feb. 6	June 1
Proposed extensions to Ingham Infirmary, South Shields, for Committee. Premiums of £250, £100 and £50. Mr. George Reavell, F.R.I.B.A., Ainwick, assessor. Conditions, dep. £2 2s., from Mr. J. Potter, Secretary of the Infirmary. Open to architects within area of Northern Architectural Association	Feb. 13	June 16
New school for Governors of King Edward VI School, Southampton. Premiums, £150, £100, £50. Mr. S. Tatchell, F.R.I.B.A., assessor. Conditions from Mr. G. A. Waller, 7, Albion-place, Southampton	April 10	June 30
Corporation Offices, Charles-street, for Leicester T.C. Premiums, £300, £200, £100. Mr. E. Berry Webber, A.R.I.B.A., assessor. Conditions from Mr. A. T. Gooseman, M.Inst.C.E., City Engineer, Town Hall. Dep. £2 2s.	Mar. 20	June 25
Branch Baths, Foleshill, for Coventry T.C. Premiums of £210, £105 and £52s. 10s. Mr. F. J. Horth, F.R.I.B.A., assessor. Conditions from Mr. F. Smith, Town Clerk, Council House. Dep. £1 1s.	Mar. 20	June 30
R.I.B.A. new premises. Assessors, Messrs. R. Atkinson, Charles Holden, H. V. Lanchester, P. S. Worthington, and Sir Giles Scott. Premiums, £500 and £250 among runners-up. All questions must reach the Secretary, 9, Conduit-street, W.1, by August 4	April 10	1932 March 31

CORRESPONDENCE

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

Modernism in Architecture and Decoration.

SIR,—It was with pleasure that I read your eminently sane leading article on "Modernism in Architecture and Decoration" in your issue of April 3. Your classification of the three ways of designing a building is stated with admirable lucidity—in fact, the student could hardly have a clearer statement of the three principal courses open to him in architectural design. But I cannot help regretting that the present condition of architectural practice should render possible such a method as that of merely copying previous styles, in addition to the methods of taking some previously accepted form of building and adapting it to one's purpose, and that of evolving some entirely new mode of design. Yet you say that the man who feels himself to be unequal to evolving a new mode of design "will do better as a copyist, and he may have no reason to be ashamed if conscientious and painstaking." It may be questioned, however, whether this attitude is not rather destructive of the vitality of the art of architecture.

Assuming that the architect is free to design as he wishes, without undue restrictions imposed by neighbouring buildings, he has to follow one of these three courses. Most architects in England choose the middle course; but it is more profitable to consider the two extremes of merely copying past styles and evolving an original style. If the architect follows the former and reproduces an old style and makes, say, a bank like a Greek temple, he merely dresses his building in the creation of another people with different thoughts, of a different civilisation and climate, in fact, of a totally different life. The spirit that created their art, if not dead, has evolved to something very different, and in reproducing it the architect shows himself a slave to its forms, not imbued with the spirit that produced these forms, for if he were he would do as those artists did and evolve a design of his own. It is not a question whether his is a living art or not, for he has no art; and if he does not feel himself capable of giving artistic forms to his building that spring direct from his own response to the modern function of building in relation to life as he finds it, then he has no justification in venturing in the sphere of architectural design. It is true great buildings, like St. George's Hall, Liverpool, have often been produced by copying past styles, but that is rather a tribute to the style copied. But is St. George's Hall an artistic expression of the life of Liverpool in the early nineteenth century as the Parthenon is an expression of the life of Athens? Hardly, and in visiting those beautiful interiors of St. George's Hall it is ancient Greece of which one thinks. Better, I contend, to have sacrificed this fine building for one less beautiful but more expressive of the urge of the time.

In the sister arts the idea of copying past work, or even past styles, would be scorned, and nothing produced in this manner would be regarded seriously as art. Even the most tentative, if sincere, effort at individual expression would be esteemed above copying a past style. Imagine an artist of to-day being commissioned to paint a number of wall panels in a modern building designed in the Renaissance manner, and painting them in the style of Titian, each with the subject, conception, design and colours directly derived from suitable pictures of Titian, works, in fact, entirely Venetian of the sixteenth century, but inevitably without the life and spirit that animated the works of the great Venetian artists. All would agree that however artistically inferior is the artist's own individual work, created in response to contemporary life, it is infinitely preferable, for it has, at least, the vitality of living thought and genuine emotion; while the other, being the dim reflection of a past glory that is not ours, has no reality and thus can only be false.

So, I think, in architecture, that for the sake of the vitality and future of the art the course should always be, even at the risk of failure, the endeavour to evolve a style of design that shall spring from sincere and deep thought on the relation of building to our own lives. For it is obvious that if artists and architects merely copied the work of the past their art would die. It is kept alive only by those who evolve design as life evolves.

ARNOLD WHITTICK.

Charing Cross Bridge: Development of South Bank.

SIR,—In his letter to *The Times* of April 7, Capt. Swinton has most happily turned to account the lesson derived from his recent visit to New Delhi. There he has seen what has been accomplished by the patient and loyal co-operation of statesmen, engineers and architects in converting an erstwhile wilderness into an oasis. Is it too much to hope that what has been done for the capital of India may be accomplished in South London?

The recommendations of the Advisory Commission involve problems in organisation, quite apart from design and construction, almost Herculean in maintaining railway services without interruption on the removal of the present Hungerford Bridge before the new bridge can be commenced. Few of this generation can expect to see the accomplishment of the task, and even this will leave the south bank with but little improvement except along the river front.

The Chairman of the Southern Railway, together with the General Manager of the Company, have stated that the existing bridge will not require to be renewed for at least fifty years. Sir Reginald Blomfield, R.A., has shown by his plan, published by the Advisory Commission, how this may be taken advantage of by its retention and the new road bridge constructed on an adjacent site, thus greatly expediting the progress but retaining the railway viaducts and bridges which have been the curse of the south bank for about two generations.

Is it beyond the wit of man to secure the co-operation of the Railway Company by generous compensation in cash for the total abandonment of their hotel, station and branch line from Cannon-street, thus furnishing capital for the entire reconstruction of London Bridge Station and its approaches, with many other improvements to the service which have for so long cried for attention?

Again, the landowners on the south bank need persuasion to help the uplift of their sorry property, much of which constitutes a blot on the map, the ultimate enhancement of values being well-nigh assured. Were Hungerford Bridge retained, as above suggested, but converted into a road bridge, its width and height are adequate. Its appearance would not be marred by the erection of covered footways which would protect pedestrians from wind and weather, an amenity much to be desired by all who cross the river on foot.

The removal of the viaducts would afford new open spaces which could be turned to account much on the lines of the site of the old fortifications in Paris, which were converted into boulevards. With the removal of the hotel to some other site, should this be insisted on, the "Eleanor Cross" in the fore court could be retained and made far more attractive in appearance by more suitable surroundings.

FRANCIS HOOPER.

Charing Cross.

SIR,—The Advisory Committee have now presented their report on the Charing Cross Bridge scheme to the London County Council, and—at long last—London should be able to congratulate herself that Lambeth, that ugly duckling, is to have a new and magnificent Grand Place equal in area to Trafalgar-square, and a wonderful new street, leading therefrom to the river, almost identical with Northumberland-avenue, the difference between the two, unfortunately, being that the Lambeth square will suffer from a permanent and deplorable birth-mark, in that it is proposed to cover about one-half of it with a strongly constructed steel and concrete floor (nearly 2½ acres in extent) for overhead railway access to the new station, a dark basement or crypt thus being formed only 18 ft. or so in clear headroom, supported by a multitude of columns sufficiently close together to carry the biggest locomotives, and over which will thunder the longest railway trains. The Advisory Committee themselves in their report to the L.C.C. say of this:—

"That most, if not all, of the area will be penetrated by a considerable amount of daylight, probably sufficient in bright weather for ordinary traffic purposes."

Every word of this should be underlined, so that all lovers of London may clearly get to know what the proposal is. But the Advisory Committee may perhaps now be thinking it is unfortunate that there has not been included in their number a skilful surgeon, as without an operation the mortifying appendix to their Report, written by Sir Giles Scott, is likely to prove fatal to all their conclusions. This damning statement is as follows:—

"I consider that scheme No. 6 has one demerit of so formidable a nature that I can see no prospect of it being satisfactorily overcome, viz., the formation of a traffic circus, a great proportion of which is covered by a railway viaduct. The viaduct is low, and the open space that it covers is approximately the size of Trafalgar-square."

Can anything be done to save us from this irretrievable blunder? Just think of it: With the one hand we are forming a Grand Place or Civic Centre—equal to anything in Europe—and with the other we ruin it for all time by permitting the viaduct approach to a great railway terminus to sprawl over it, and this, in spite of its having been demonstrated in some of the other selected schemes that it is possible to push back the railway station as far as Waterloo, or, alternatively, to lower it to the natural level, and thus leave all roads and buildings free and open to the sky for ever.

M. LESLIE.

The Estimator's Difficulties.

SIR,—I quite agree with "Forward" that his proposals would add at least "a couple of columns that grandfather did not use," and suggest that for a job of any size they would also add a couple of hundred pages of matter of little or no use to grandson, despite his youthful precocity. But I cannot agree that reputable surveyors seek cover as described by "Forward." If his experience leads him to believe that in practice qualified surveyors cannot prepare accurate bills based on the standard method in such a way as to be intelligible to the competent estimator, then I pity him.

In Mr. G. Cook's case my sympathies are excited by an altogether different cause. He appears to be posed in the problems he sets by the difficulty of separating the labour values from those of the materials. Pricing labour is, I agree, always difficult and should not be attempted by the inexperienced. But if, as I gather from the example he quotes, his work lies amongst architects and their clients able to afford "best" quality sheet-glass, my sympathy is turned to envy. I think he would find by discreet inquiry that of all the clear sheet-glass cut up for glazing

(Continued on page 723.)

ROYAL INSTITUTE OF BRITISH ARCHITECTS

MODERN FLATS.

A PAPER on this subject, illustrated by a large number of lantern slides, was read by Mr. G. G. Wornum, F.R.I.B.A., at a meeting of the R.I.B.A., held at 9, Conduit-street, W., on Monday evening. The President, Sir Banister Fletcher, F.S.A., occupied the chair.

The lecturer said that in preparing his paper he had been strongly moved to put before them mainly the work that had been designed and carried out by the London County Council. He was restricting himself almost entirely to the subject of housing the working classes, and he held that nowhere in the world to-day was such a high standard of housing maintained as by that great London body. We had all heard talked of so much the attractions of the Vienna housing, the originality and ambition of the German housing, the quaintness of the Dutch housing, that we had left very much unsung the saneness of the English housing. Having briefly described the first efforts in London to legislate for better working-class housing, and the arrival of the London County Council to take the helm and develop its housing to the extent it embraced to-day, the lecturer said the L.C.C. admitted of a Superintending Architect to the Council and a large staff under him. Mr. Topham Forrest, who filled the former role, had earned the praise of the whole profession for the conduct of his department, with all its ramifications, apart from his duties as supervising architect. The enormous amount of building, however, had to be decentralised. This was achieved by the appointment of a certain number of principal assistants, who became, in effect, themselves architects to certain schemes under the supreme control of the supervising architect. This system had drawn some first-class men to the department and produced far better results than the Office of Works system. He felt sure that in connection with certain L.C.C. schemes he was about to describe and show he might mention the name of Mr. Minton Taylor, a Licentiate of that Institute, in whose hands these schemes had been mainly developed. One might say that he had devoted his life to the tenement problem, and having known him for some years he had not yet plumbed the depths of his experience.

Most of the important housing schemes abroad were built outside the cities. No city had so difficult a problem to face as London. She was troubled by enormous areas of slum, consisting of occupied houses both by their density and condition unfit for human habitation. Before any rebuilding could be commenced the existing tenants had to be housed elsewhere. Many of them must live centrally in the Metropolis so as to be near their work, and such land as they occupied was expensive.

Showing a slide of the Tabard Garden Estate before the rebuilding in 1917, the lecturer said it consisted of 16½ acres, and what they saw were two-story houses with a density of over 80 houses to the acre. He need hardly mention that the maximum density that State-aided housing allowed was 12 to the acre. He might further add that a density of 60 to the acre brought houses 12 ft. back to front of each other.

Showing the lay-out plan as now completed, the lecturer said about half the former population was housed and an area of five acres of recreation ground was created. A standard of planning was set to give every living-room 160 sq. ft. and every bedroom 100 sq. ft. minimum. The scheme housed 4,500 people, though there might have been some births since his statistics were made. This scheme was started before the War and there was not then the pressing need for density that there was to-day. The new scheme at East Hill, Wandsworth, allowed of 66 flats per acre and the housing of two persons per habitable room was allowed for. Since the passing of the 1930 Act a density of 1 2-3rd persons per habitable room was allowed for in rehousing schemes. Such was the difference in result between two-story and five-story building, new slums were not being created by these modern tenement blocks.

Under stress of terrible overcrowding the L.C.C. some years ago planned nine-story blocks for the Ossulston-street area in Kentish Town. This height necessitated both lifts and central heating and hot water. On examination the scheme was found to be too costly. A lift was tried out at Tabard-street and was still there—its cost at Ossulston-street for nine stories was estimated at £211 per annum without an attendant, who would cost a further £150. The lift at Tabard-street was unlocked by the tenant when required, but did not help his visitors and no further lifts had been installed. The Ossulston-street scheme, however, fired Messrs. Barnes and Davidge to produce a very interesting scheme for Limehouse, which ran to eleven stories and covered an area greater than Hampton Court. This was to rehouse 2,500 persons from Limehouse Fields. A particular innovation in the planning was the arrangement of two-story dwellings with the outside approach balconies passing the lower floors of each tenement only. Central heating, hot water, and lifts were schemed and a small balcony court was given each flat. This scheme, as far as he knew, had never matured.

With the relaxation of the London Building Act five-story buildings (one story being in the roof) could be erected with 13½ in. outside walls throughout, and this appeared to be the economic height to build at present.

He now proposed to occupy a few minutes on the plan evolution of the L.C.C. tenement. Such a survey brought out more clearly than any other means the salient points in the modern planning of such buildings. When Mr. Minton Taylor first joined the L.C.C. in 1892 tenements, such as those at Poplar, were being built. They were four stories high and flat roofed. The stairs served two flats on each floor and the cost was 1s. 1d. per cubic foot. Peabody Buildings, Guinness Trust Buildings and other housing organisations all followed this model more or less. In 1893 an improvement was effected by introducing a small outside balcony that gave facilities for drying washing and the storage of refuse pails. It also gave ventilated access to the W.C.

Mr. Minton Taylor soon felt that these buildings were too costly, and that by providing four flats to a stair on each floor considerable saving could be effected. In 1895 was evolved the plan of an inside corridor serving four flats per floor, and across this corridor was a lock-up W.C. for each tenant and a communal scullery on each landing. This had hot water laid on, and shortly afterwards a bath was installed in this room for use of the tenants. No water was laid on to the flats themselves and a communal laundry was built for household washing. This, at the time, was considered worth while since this block was part of a large scheme covering 20 acres. This type block was roofed with a pitched roof and the cost came right down to 9d. per foot cube.

In the plan of the Millbank block (1899), Mr. Taylor achieved five flats per floor to one staircase, on the same lines as the former, but a communal laundry with copper was installed on each landing above the ground floor in place of the central estate building for that purpose.

Mr. Riley was appointed Superintending Architect in 1898, and he considered the type plan so far evolved as unhealthy in regard to the W.C. approach. He evolved the outside balcony approach system to the various flats, the forerunner of that most favoured to-day. The first schemes consisted of long outside balconies served off staircases at each floor level, and these balconies ran regardlessly past bedroom and living-room windows. Modifications were soon made and a balcony past a living-room window was allowed to remain as satisfactory, but bedroom windows on these public approaches were avoided. Improvements were then made to avoid passing the living-room windows and we eventually came to such a plan as the recent scheme at Hackney, which was put into the charge of Mr. Taylor.

One of the great difficulties of tenement planning had been the satisfactory provision of laundry facilities. He had referred to the communal laundry at Boundary-street in 1895. This arrangement proved unsatisfactory owing to the estate being situated in one of the morally worst quarters in London, and it was alleged that the women, when at the tub, corrupted one another and caused trouble. For years subsequent to this, coppers were provided in each self-contained tenement, but no doubt at terrible cost to health. Those who studied the causes of rheumatism held that the drying of damp clothes in living-rooms claimed a large quantity of sufferers of this scourge, and at the least predisposed them to it. It was only in the last year or two that the L.C.C. had tried out using the topmost story of their tenements for laundry drying. He believed he might say that Mr. Taylor was responsible for the idea. He argued that all the warmth of the building from the flues collected there and that outdoor facilities for drying were useless on more than one-third of the year and were then uncertain. A certain amount of bedroom space was sacrificed, but the amenities and improvement to health were well worth while. Normally 7 ft. of washing line were allowed for each family, and assuming five washing days per week, this was equivalent to a weekly 35 ft. per flat. Two to three washings could be dried in sequence in these roofs per day.

The next plans shown by the lecturer would, he said, appear to be a retrogression to the plans of Mr. Taylor in 1895. They showed communal bathrooms and lock-up W.C.'s and sinks across the corridors. The reason for them was a "decanting" one. In providing accommodation for persons in condemned areas, the L.C.C. had to justify the rents they charged being below their normal property rents.

Another slide showed a further decanting requirement. It was known as the "lodger plan." It was to provide suitable bed-sitting-room accommodation for lodgers in other people's flats. The bath and kitchen were shared, but a food cupboard and a cupboard to receive a fold-up bed were provided.

Showing the plan of a Bloomsbury tenement, the lecturer said it might come as rather a surprise when he stated that it was the only English plan with 99 foreign ones reproduced in a publication last year on the model "minimum house." It was incidentally crossed through and labelled back number and was the only example so treated. This publication emanated from a Society of International Architects interested in housing and representing eighteen countries. He was present last Christmas at the tail end of their annual meeting in Brussels, and Le Corbusier was advocating for tenements that all windows should be hermetically sealed and that what he termed "l'air exacte" should be pumped into the rooms so as to give the tenants the benefit of the purest air science could devise. He further advocated as a solution of the road traffic problem that roads should be made in place of approach balconies at every floor level. One might accuse such a society of being mere pipe-dreamers, but there were among the representatives some clever practical men and the complete ignorance abroad of our high standard of housing appeared really lamentable.

He was told that a short while ago a member of the L.C.C. Housing Committee complained to the Architect's Department that Vienna had gone so far ahead of us. The member showed a plan and photo of a Viennese block. The architect identified the plan as being one sent by the L.C.C. to Vienna 30 years ago.

Giving some views of tenement blocks for which Mr. Minton Taylor was responsible under the supreme control of Mr. Topham Forrest, the lecturer said the magnificent estate at East Hill, Wandsworth, was built on land formerly occupied by almshouses of the Fishmongers' Company, and much praise was due for that fine scheme. The buildings attained a close density—they were only 50 ft. apart and constituted an important decanting

scheme for condemned housing elsewhere. It was estimated that the trimmings, such as gauged-brick arches, stone courses, etc., constituted a penny a week on the rent of each flat.

Owing to the closeness of the blocks to each other, aspect was sacrificed and all approach balconies were placed away from the road frontage so as to give a pleasanter look-out from all living-rooms. The site fell very considerably from back to front and called for very skilful handling. The dark corners formed in each court contained the staircases. The four staircases connected up at the third-floor level and formed alternative means of escape from fire.

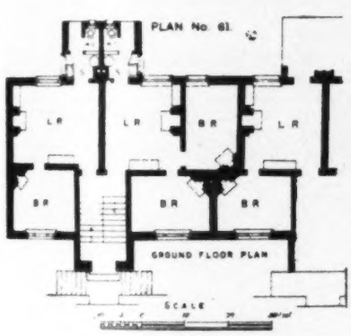
In the block at Hornsey Rise, Mr. Taylor had put all his balcony approaches outside the courtyard. The brick walls were carried up an extra story in the centre and the ground-floor walls were thickened out to eighteen inches accordingly.

The scheme on the Shore Estate, Hackney, showed some of Mr. Taylor's Dutch blood. It was extremely successful, carried out entirely in stock bricks. Referring to a detail view of the staircase and refuse chambers on the Shore Estate, the lecturer said refuse from the various floors in tenement blocks was disposed of through letter-box openings and was conveyed down 12 in. glazed drain pipes to central chambers. A vent was carried up from this pipe through the roof. The glazed pipe was cased in 4½ in. brickwork.

The first buildings on the revised Ossulston-street Estate scheme had now been completed and purported to be an answer to the demand for Viennese flats in London. He thought the lay-out was extremely attractive and the planning embodied all that was best on the L.C.C. lines, but he did not think the rendered walls were suitable to London. The neighbourhood was extremely dirty, and for some reason we did not seem able to use cement rendering in this country without crazing. The trees were but freshly planted, but when grown up the court would be extremely pleasant. Mr. E. Haden Parkes, of the L.C.C. architectural staff, was put in charge of the design, and one might well praise the interesting grouping which had been achieved at no detriment to the planning of any flats themselves. Mr. Parkes was responsible for most of the housing work at Downham and Becontree. He joined the L.C.C. in 1894.

Showing a few views of the Larkhall Estate, Clapham, the lecturer said these were introduced in that paper since in accommodation they were similar to working-class flats, though their finish was slightly better. Such accommodation, moreover, was all that a large number of the middle-class could afford. The scheme was an important one in being the first big private enterprise to provide, without subsidy, flats at a reasonably low rent to suit limited incomes. The scheme was due to the initiative and imagination of Sir Theodore Chambers. The estate originally comprised old Victorian houses, with well-treed gardens. One-quarter of the scheme had been built at present. The general planning and construction were based on the L.C.C. lines with the exception of introducing two-story flats at the first-floor level. This was the same solution of the balcony approach problem as exercised by Messrs. Barnes and Davidge in their scheme for Limehouse. Each of the five courts was arranged with two sides N.E. and N.W. with balcony approaches and two sides S.E. and S.W. with living-room windows to catch the sun. The connection of the balconies at third-floor level obviated the necessity for emergency stairs. Each block contained a central hot-water plant fired by oil. Two small electrically equipped laundries were included in each of the first few blocks, but were not patronised by the tenants. The scheme as built was made possible by a 40-year loan by the L.C.C. on a valuation of 9-10ths of the cost. The cost of the buildings, exclusive of the gardens and site work but including the hot water, was 1/7d. per foot cube.

The lecturer said he was not illustrating any Scandinavian flats, partly owing to time and partly to the fact that they helped us



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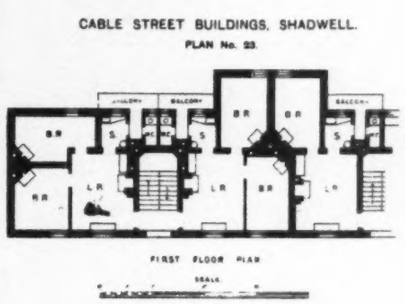

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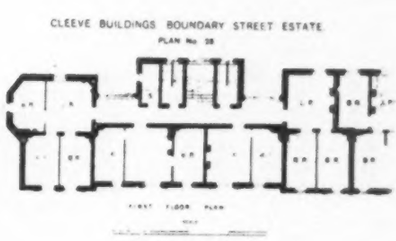

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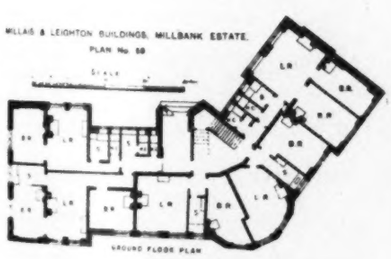

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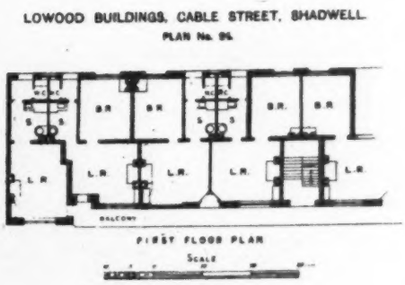

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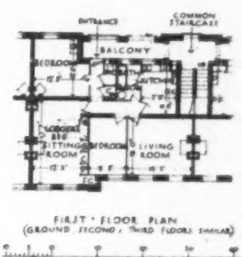
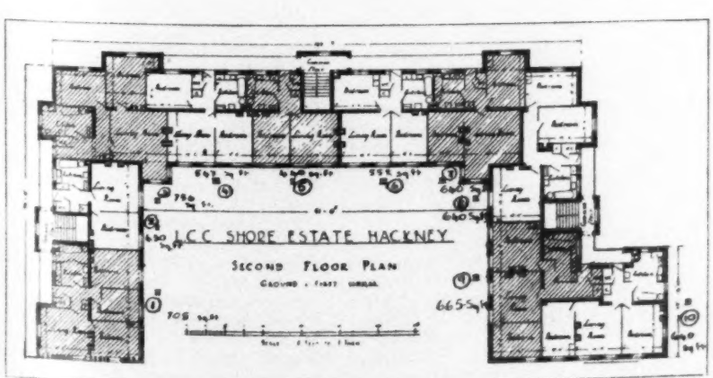


PART PLAN OF TENEMENT DWELLING SHOWING LODGER TYPE LETTING AT EAST HILL, WANDSWORTH, S.W.

1930.



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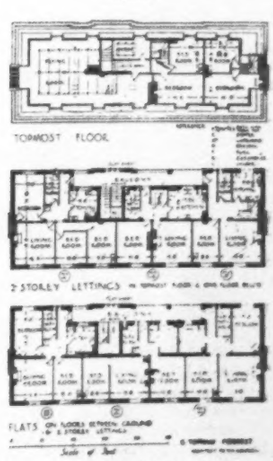

1930.

These plans represent the development of the outside balcony approach to L.C.C. Tenements, described in Mr. Wornum's Paper.

very little in planning. The prevalence of the inside bath and water closet, especially the latter, made their system inapplicable to this country. He must say, however, a few words about the serious effort they had made ever since the organising of the Housing Exhibition at Stockholm in 1930. It was decided that flats and houses should be built without subsidy and let at rentals scaled to income. It was held necessary that every adult person should have his or her own bedroom—minimum size of rooms to be 96 sq. ft. and rooms 8 ft. 10 in. high. The parallel strip lay-out of blocks was favoured, set diagonally on the compass and facing a little more east than west, to equalise the solar heat. They favoured high buildings and were putting up 12-story blocks in Stockholm. It was maintained that high building cost less and that six-story blocks cost more than four-story blocks. Taking a rental of 8½ per cent. to 10 per cent. on capital cost the average flat cost 21s. a week against 18s. 8d. for the average house. The house for comparison was one built of timber with boarded exterior and walls lined inside with their special cardboard. Lifts were estimated at £88 per annum for six stories and £446 for twelve stories to take six or seven persons. Such flats as they planned for two to three persons occupied only 387 sq. ft. cost £40 to £50 per annum exclusive of rates, and consisted of living-room with two beds (or a bedroom with living table and two chairs), a small dining room with bed in it, a small kitchen with borrowed light, and a bath and w.c. with no outside window.

He had not a very good word to say about modern Dutch flats. Their low standard was due to two main factors—one was that they were planned by speculative builders and not architects, and the other was that the rating and loan systems all encouraged poor accommodation and finish. To obtain building loans the facades had to be designed by qualified architects, who got paid £1 per yard of facade for their work and who had to make the best of the plans provided. The rating authorities assessed their valuation on the standard of living of each tenant and the provision of a bath sent the rating up and the amount of loan down.

He saw some blocks in Amsterdam last summer, some eight stories high. Each main stair was constructed of wood and was three feet wide and served two flats per floor. The floors throughout were of wood and there was no secondary means of escape from fire. The whole construction was extremely shoddy.

Showing the facade of some flats designed by Le Klerk, the lecturer drew attention to the zig-zag balconies the architect planted on to give some character to the material he was provided with. All creation of tenement blocks seemed to attempt horizontality. It was perhaps in answer to a thought expressed by Anatole France in his "Monsieur Bergeret in Paris." He observed: "To my mind the precision of modern homes reveals the daily function of the creatures enclosed in them, as plainly as though the floors and ceilings were of glass. And all these people who dine one above another, play piano one above another, and go to bed one above another in a perfectly symmetrical fashion; when one thinks of it, they offer a spectacle both comical and humiliating."

Germany had done a great deal of experimenting in housing since the War. She had produced some fine lay-out plans, but she had not attained charm with much of it. The buildings were often so brutal or mechanised. A circular scheme at Leipzic was of interest, though much beyond the poor working man in cost. Most of the German schemes were working-class flats for middle-class rents.

A staggered plan at Frankfort was adopted to get the maximum sun. Unfortunately it got the maximum cold also, and the system was now unpopular for that reason.

It seemed curious that the Germans with their vast schemes in Hamburg, Berlin, Leipzic, Cologne and other cities did not organise their heating and hot water—no central systems were installed. Yet by organisation and standardisation the fitting-up of their kitchens was exemplary.

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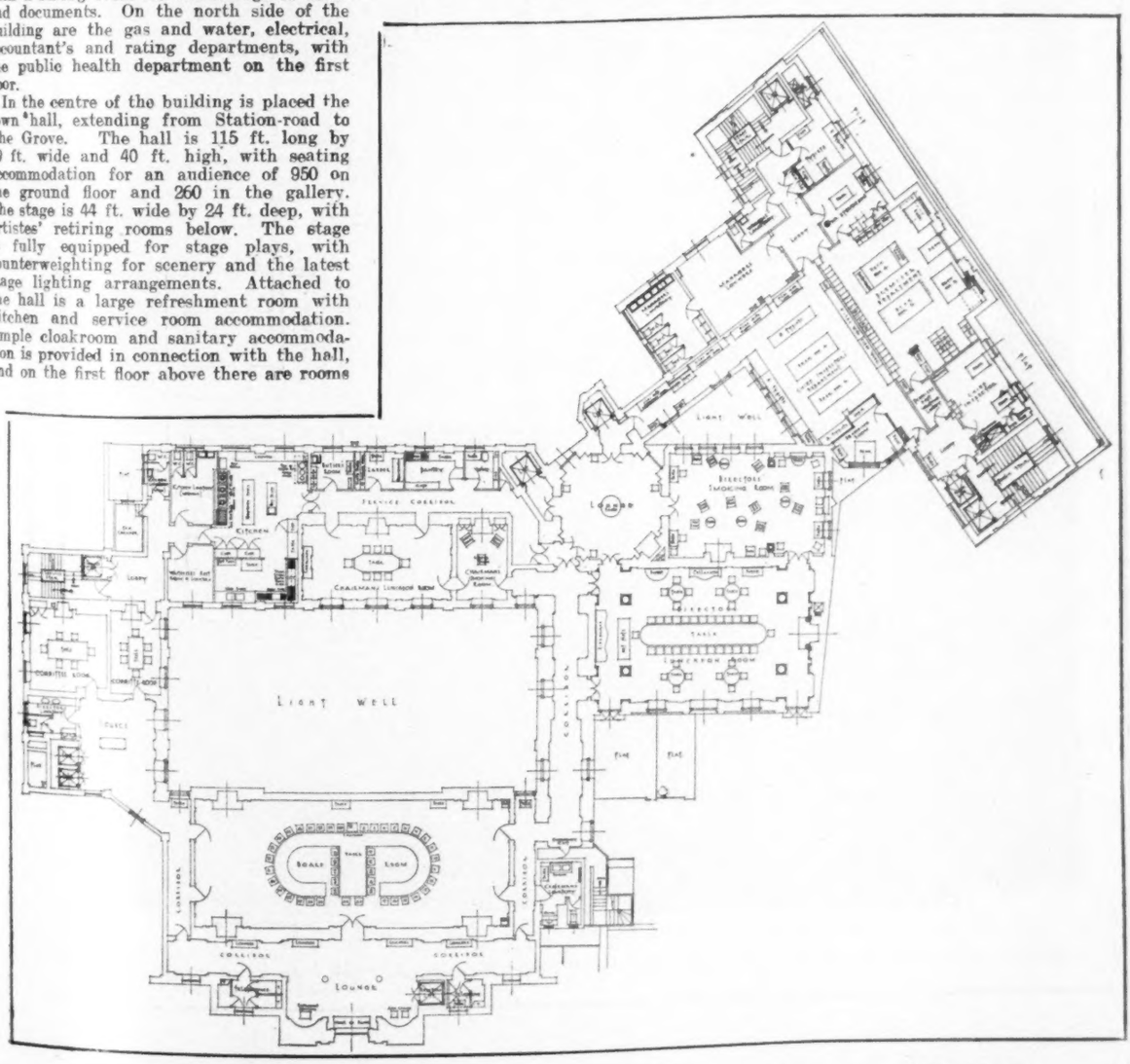

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very little in planning. The prevalence of the inside bath and water closet, especially the latter, made their system inapplicable to this country. He must say, however, a few words about the serious effort they had made ever since the organising of the Housing Exhibition at Stockholm in 1930. It was decided that flats and houses should be built without subsidy and let at rentals scaled to income. It was held necessary that every adult person should have his or her own bedroom—minimum size of rooms to be 96 sq. ft. and rooms 8 ft. 10 in. high. The parallel strip lay-out of blocks was favoured, set diagonally on the compass and facing a little more east than west, to equalise the solar heat They favoured high buildings and were putting up 12-story blocks in Stockholm. It was maintained that high building cost less and that six-story blocks cost more than four-story blocks. Taking a rental of 8½ per cent. to 10 per cent. on capital cost the average flat cost 21s. a week against 18s. 8d. for the average house. The house for comparison was one built of timber with boarded exterior and walls lined inside with their special cardboard. Lifts were estimated at £88 per annum for six stories and £446 for twelve stories to take six or seven persons. Such flats as they planned for two to three persons occupied only 387 sq. ft. cost £40 to £50 per annum exclusive of rates, and consisted of living-room with two beds (or a bedroom with living table and two chairs), a small dining room with bed in it, a small kitchen with borrowed light, and a bath and w.c. with no outside window.

He had not a very good word to say about modern Dutch flats. Their low standard was due to two main factors—one was that they were planned by speculative builders and not architects, and the other was that the rating and loan systems all encouraged poor accommodation and finish. To obtain building loans the facades had to be designed by qualified architects, who got paid £1 per yard of facade for their work and who had to make the best of the plans provided. The rating authorities assessed their valuation on the standard of living of each tenant and the provision of a bath sent the rating up and the amount of loan down.

He saw some blocks in Amsterdam last summer, some eight stories high. Each main stair was constructed of wood and was three feet wide and served two flats per floor. The floors throughout were of wood and there was no secondary means of escape from fire. The whole construction was extremely shoddy.

Showing the facade of some flats designed by Le Klerk, the lecturer drew attention to the zig-zag balconies the architect planted on to give some character to the material he was provided with. All creation of tenement blocks seemed to attempt horizontality. It was perhaps in answer to a thought expressed by Anatole France in his "Monsieur Bergeret in Paris." He observed: "To my mind the precision of modern homes reveals the daily function of the creatures enclosed in them, as plainly as though the floors and ceilings were of glass. And all these people who dine one above another, play piano one above another, and go to bed one above another in a perfectly symmetrical fashion; when one thinks of it, they offer a spectacle both comical and humiliating."

Germany had done a great deal of experimenting in housing since the War. She had produced some fine lay-out plans, but she had not attained charm with much of it. The buildings were often so brutal or mechanised. A circular scheme at Leipzic was of interest, though much beyond the poor working man in cost. Most of the German schemes were working-class flats for middle-class rents.

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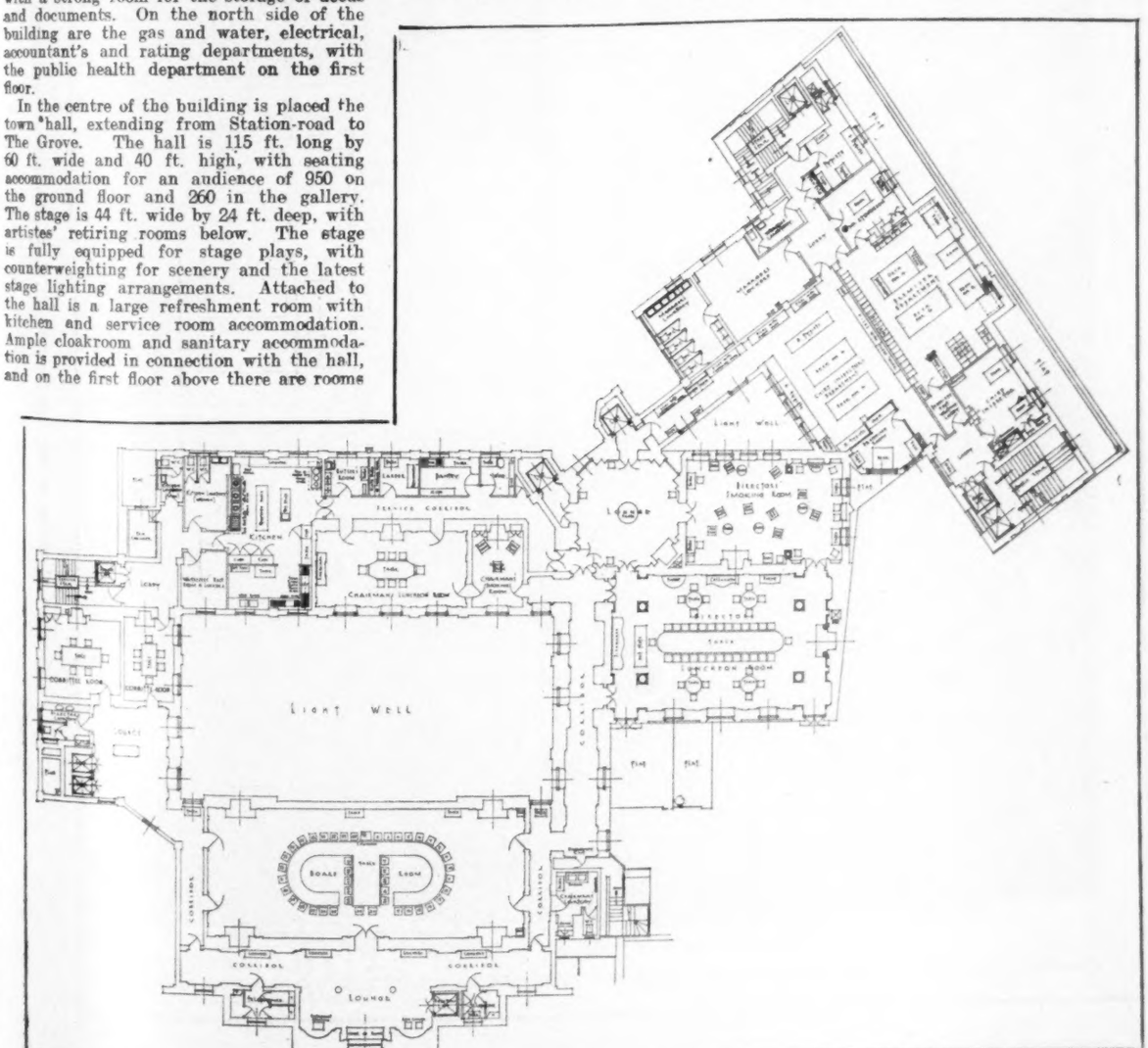

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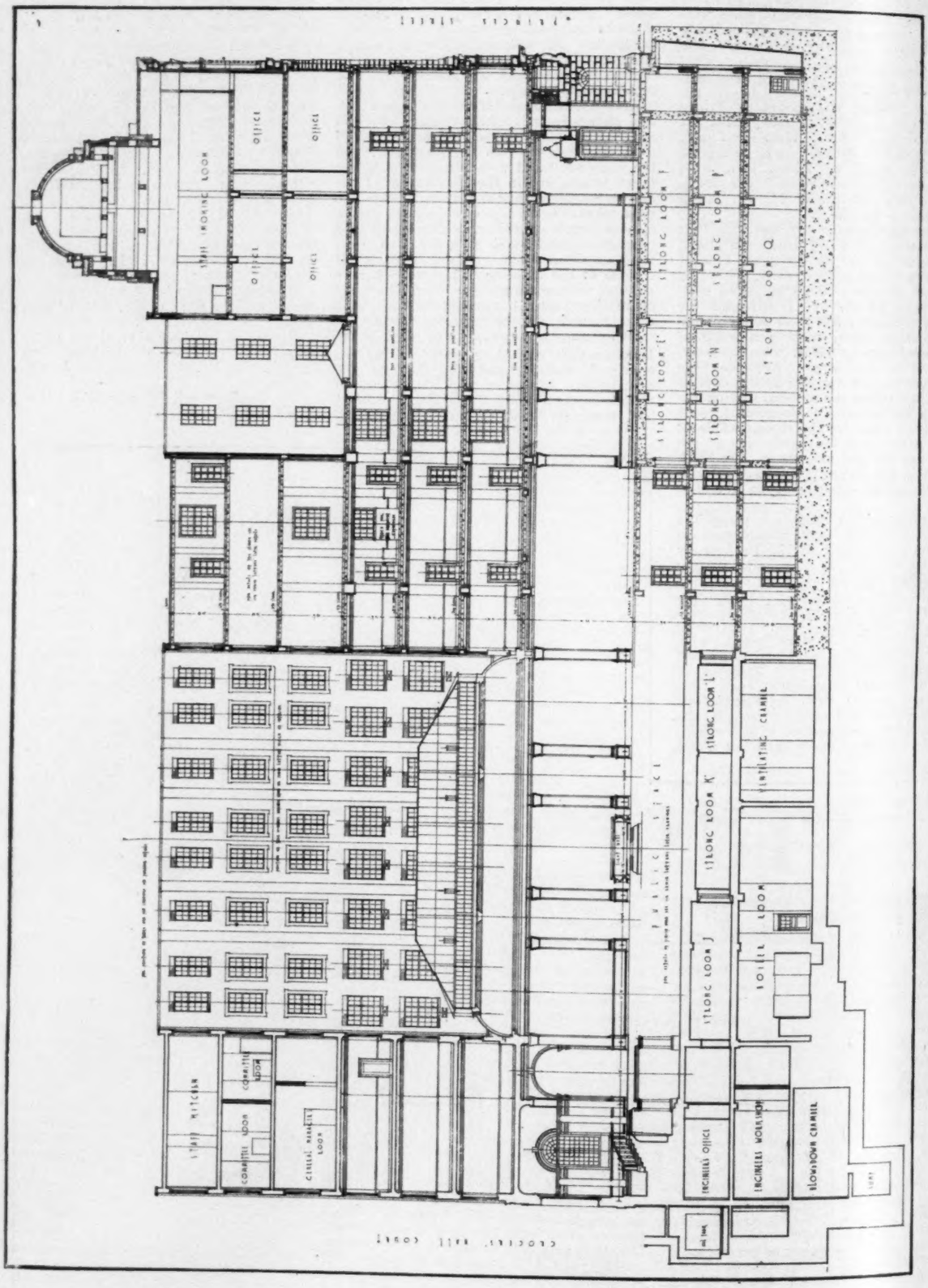

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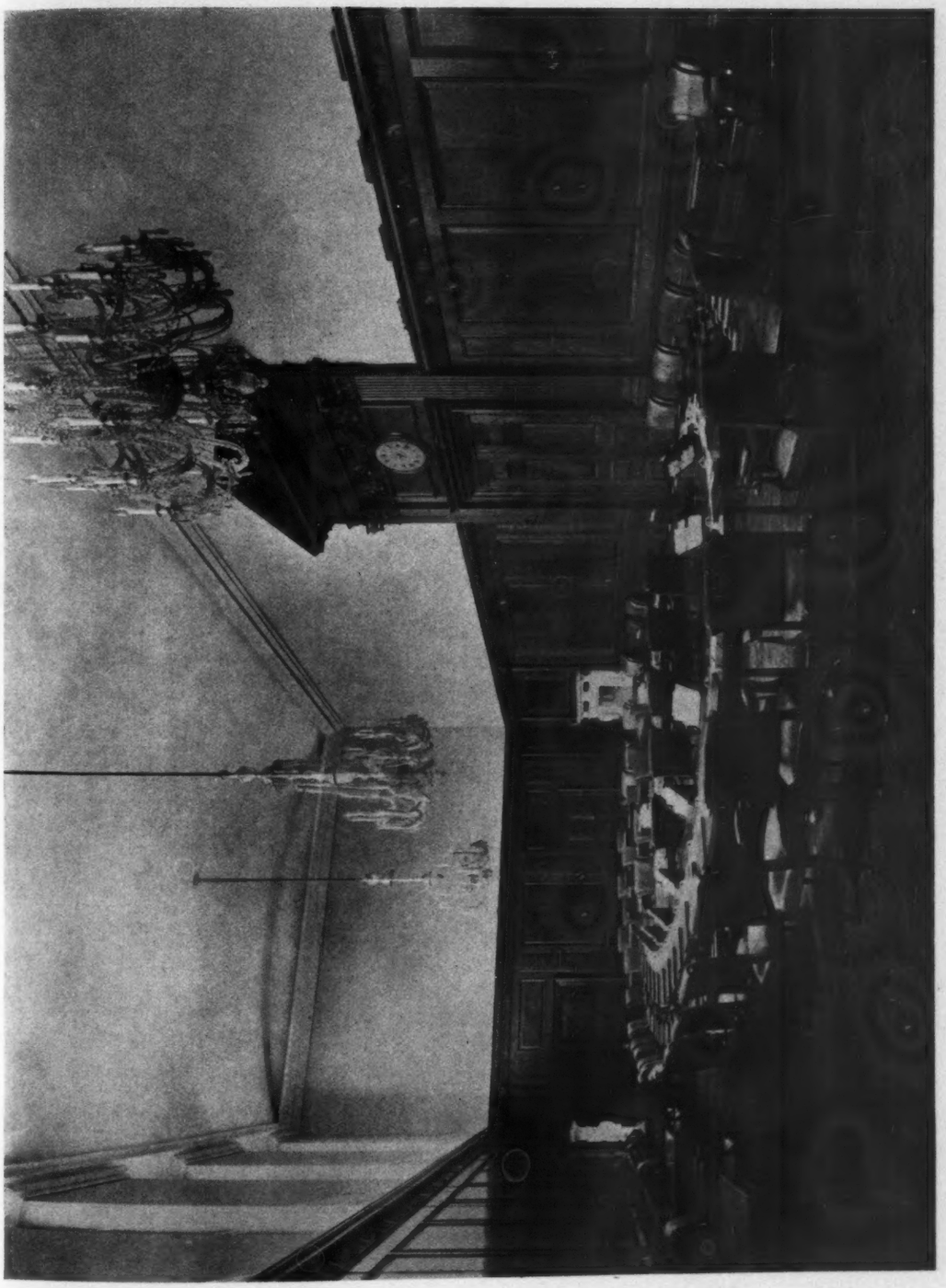

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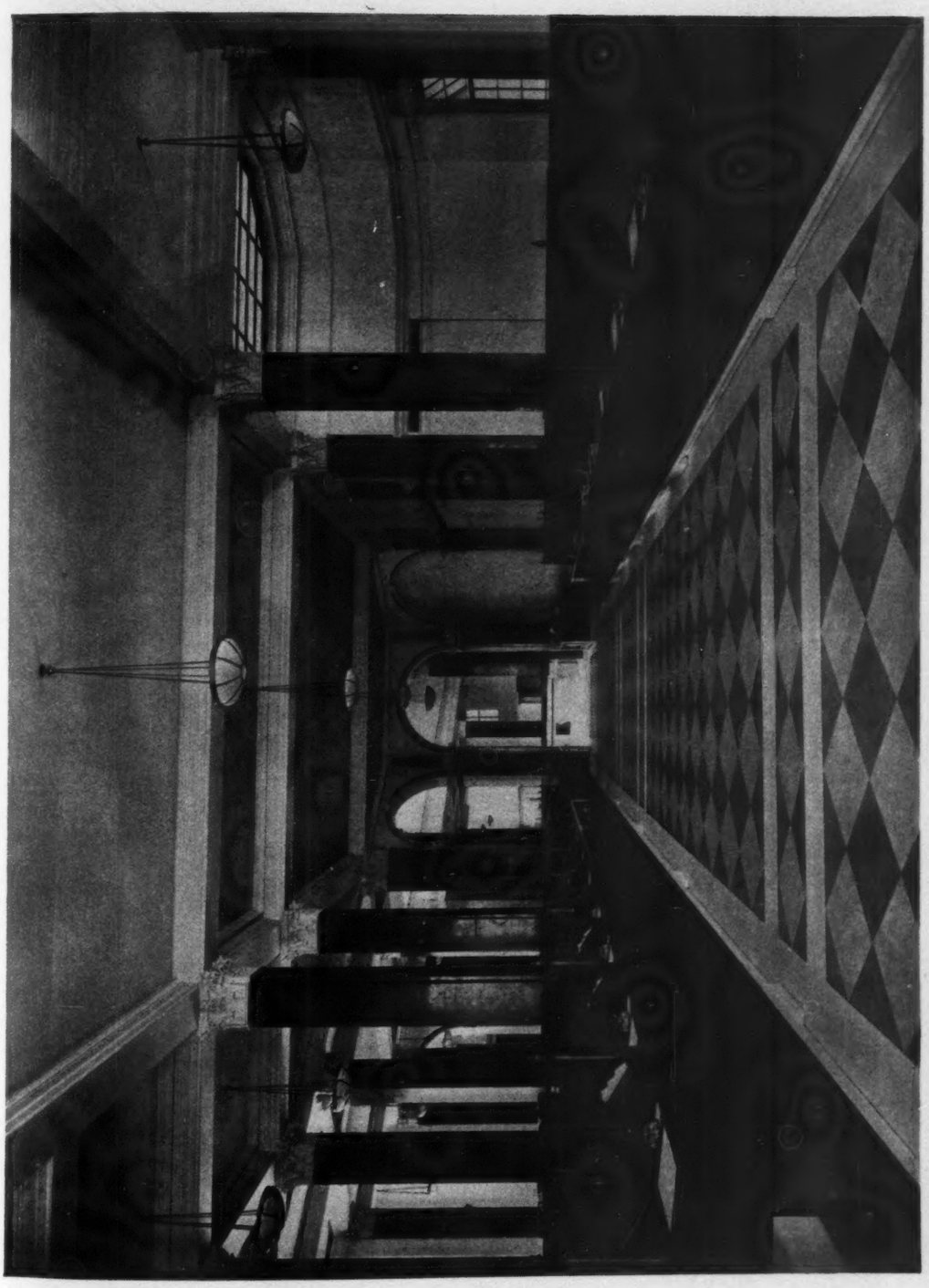

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DIRECTORS' LUNCHEON ROOM.

New Head Office of the Midland Bank, Ltd., Poultry, E.C.

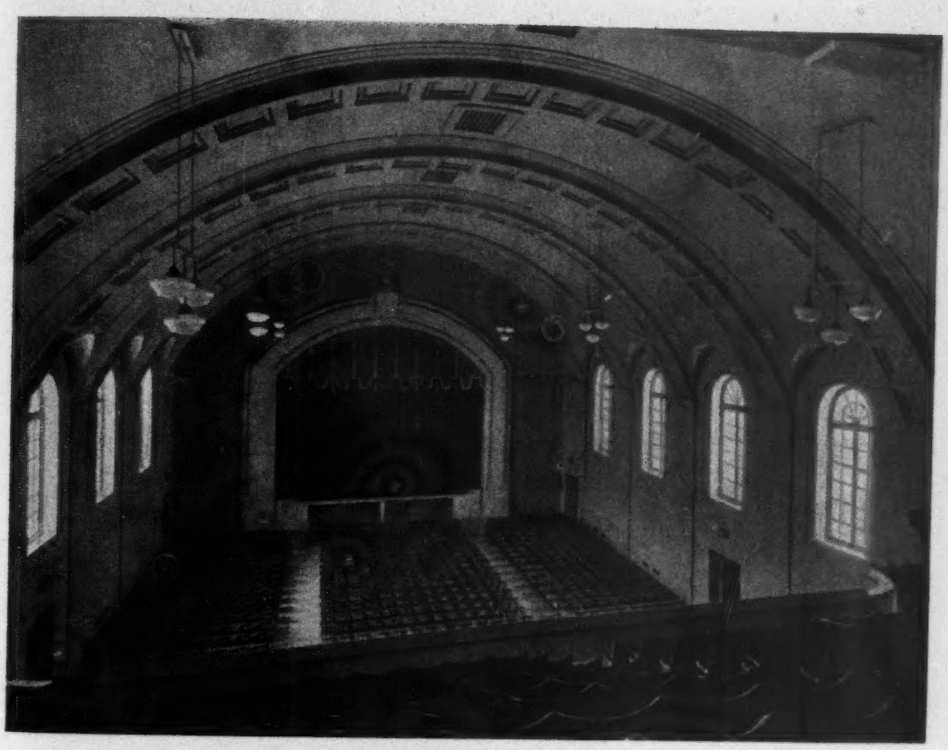
MESSRS. GOTCH & SAUNDERS (LAURENCE M. GOTCH, F.R.I.B.A.) with SIR EDWIN LUTYENS, R.A., Architects.

Superintendents' Department, Third Floor.

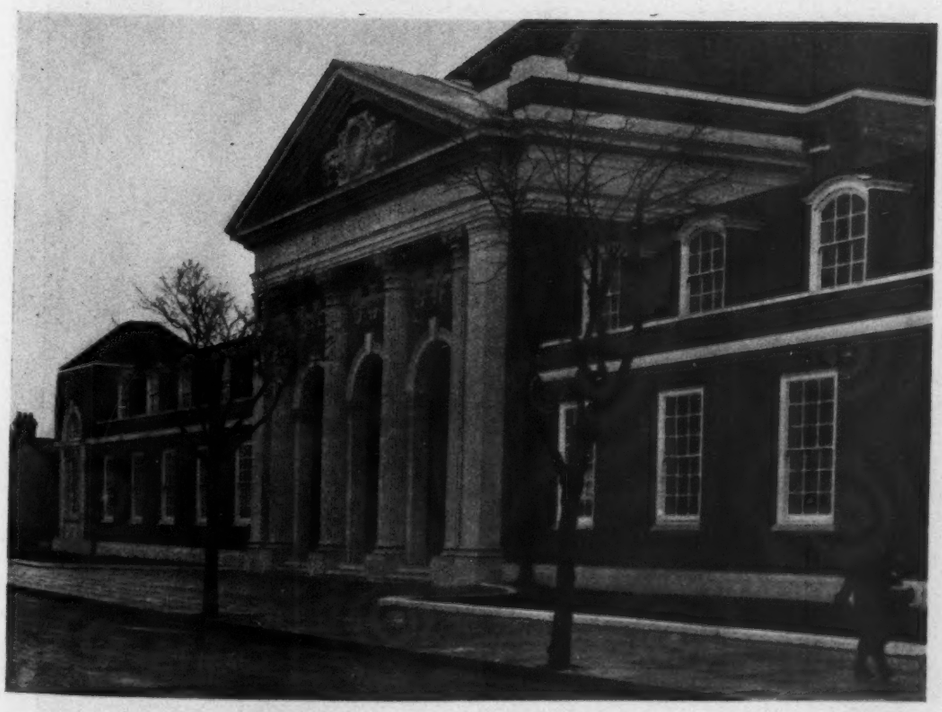
Country Clearing Department.

New Head Office of the Midland Bank, Ltd., Poultry, E.C.

Messrs. Gotch & Saunders (Laurence M. Gotch, F.R.I.B.A.) with Sir Edwin Lutyens, R.A., Architects.



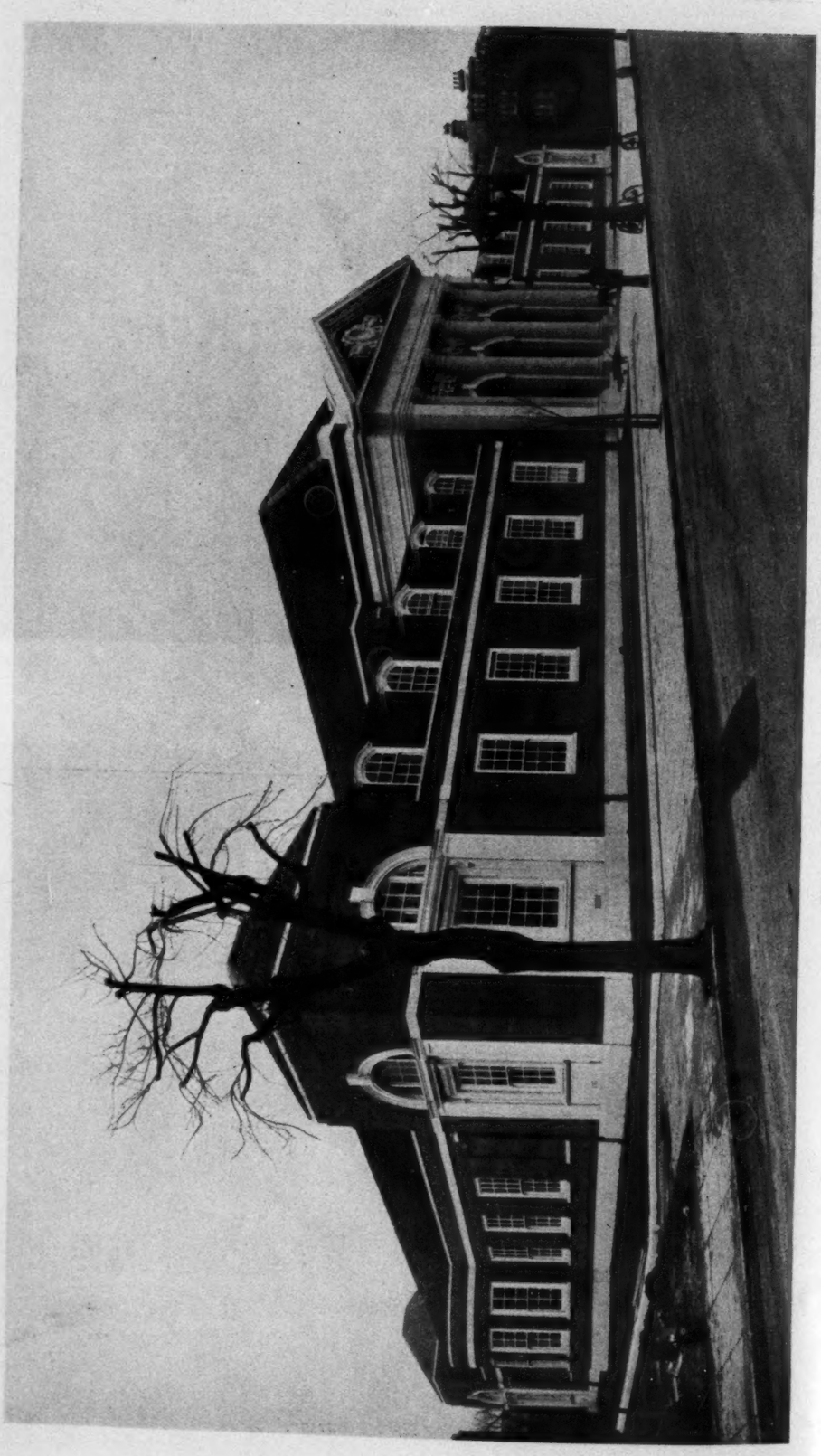
INTERIOR OF THE TOWN HALL.



DETAIL OF MAIN FRONTAGE.

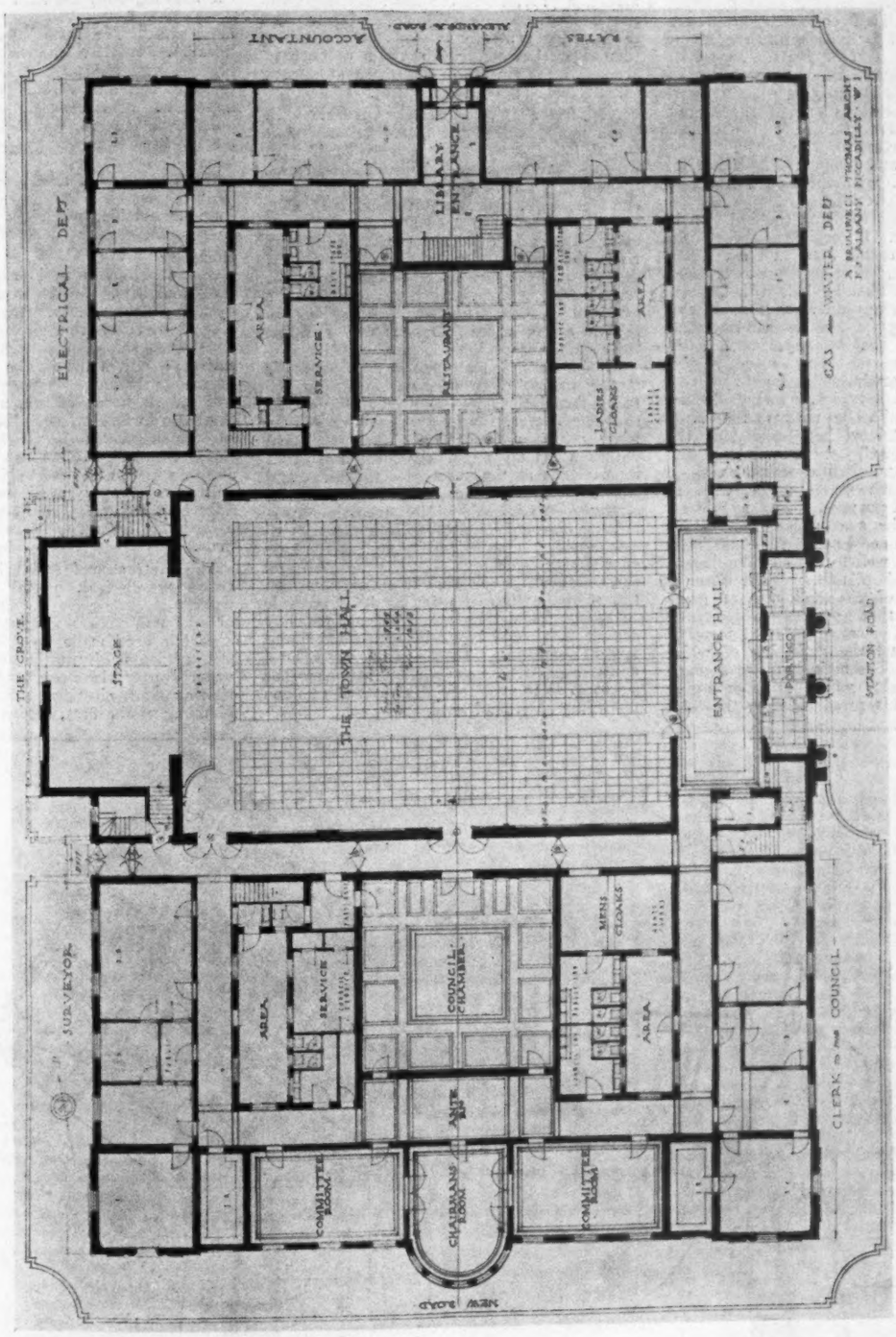
Clacton Town Hall.

SIR A. BRUMWELL THOMAS, F.R.I.B.A., Architect.



Clacton Town Hall: General View.

SIR A. BRUMWELL THOMAS, F.R.I.B.A., Architect.



Clacton Town Hall: Ground-floor Plan.

SIR A. BRUMWELL THOMAS, F.R.I.B.A., Architect.

THE MIDLAND BANK HEADQUARTERS

THE new headquarters of the Midland Bank, which have been in course of erection for the past five years on a site having frontages to Poultry and Princes-street, E.C., are now completed with the exception of three end bays on either flank of the Poultry elevation, which cannot yet be built owing to the leases of the old property still standing being unexpired. These final sections, however, are expected to be put in hand within the course of the next three or four years. Now that the work has reached its present advanced stage it is appropriate to give some account of it for its interest as one of the largest and most efficiently planned and equipped banking headquarters in the world.

Messrs. Gotch and Saunders (Laurence M. Gotch, F.R.I.B.A.) with Sir Edwin Lutyens, R.A., are the architects.

From foundations to dome the building is about 200 ft. high. It consists of three basement floors, a ground floor and six floors above. The ground floor, of course, is occupied by the great banking hall which, when completed, will occupy an area of about one acre. Its planning may be studied from the plan reproduced below, from which it will at once be seen how cleverly the architects have produced a formality and unity of effect on a typically awkward City site. One immediately notices the large white marble "bowl" feature in the middle of the hall at the intersection of the Poultry and Princes-street axes—a clever device which serves an æsthetic as well as a practical purpose, acting, as it does, as a focus for the eye on both axes—thus unifying the two sections of the building—and as a lighting well to the corridor below. The columns and pilasters which form a striking feature of the hall, are of green verdite—a stone that comes from Northern Rhodesia in small pieces, and is put together like malachite—and the walls are of white statuary marble. The main hall has a coved rectangular toplight, which provides excellent lighting to this great interior, the total effect of which is one of rich and dignified simplicity.

The flooring is in rubber of chequer pattern, and artificial lighting is by semi-indirect bowl-shaped fittings. The counters, joinery and decorative carving are of American walnut. A complete schedule of the accommodation provided in the main banking hall, the Princes-street section and throughout the building generally is given at the end of this article, so we may pass on at once to a general description of the more prominent architectural and other features.

A staircase in white statuary marble with green inlay leads down from the main hall to the first basement, which is lined with Roman Travertine. The chief department at this level is the renter safe deposit, with its enormous steel door weighing about 22 tons, which may yet be opened and closed by one man. The safe deposit itself is lined from floor to ceiling with small stainless steel drawers of varying sizes, which may be rented by customers of the bank for the bestowal of securities, etc. Adjacent are private rooms where customers may examine their valuables at their leisure.

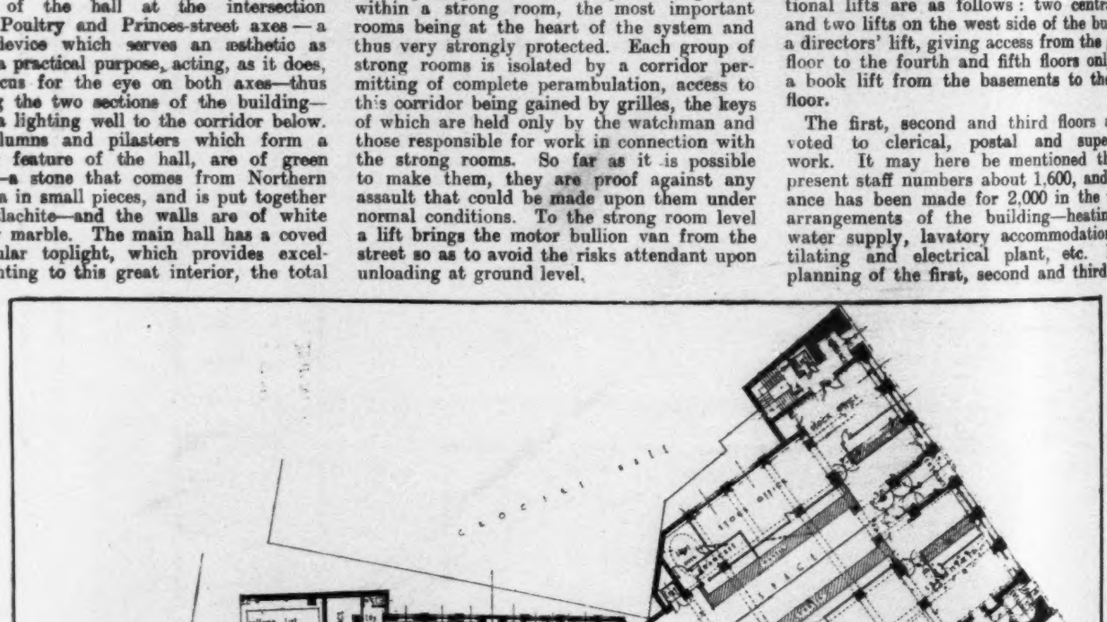
In the second basement are the bank's strong rooms, of which, naturally, no detailed description may be given. It may be stated, however, that they are built on the island principle—that is to say, a strong room within a strong room, the most important rooms being at the heart of the system and thus very strongly protected. Each group of strong rooms is isolated by a corridor permitting of complete perambulation, access to this corridor being gained by grilles, the keys of which are held only by the watchman and those responsible for work in connection with the strong rooms. So far as it is possible to make them, they are proof against any assault that could be made upon them under normal conditions. To the strong room level a lift brings the motor bullion van from the street so as to avoid the risks attendant upon unloading at ground level.

The third basement is the nerve centre of the whole building, accommodating, as it does, the engineering department, including the boiler-room, the ventilating plant, the electric control room, the vacuum cleaning plant, etc. There are three wells, sunk to a depth of 550 ft., and the water is pumped up to the roof for distribution by gravity.

Continuing our survey of the building above the banking hall, the next feature of interest is the telephone exchange on the first-floor mezzanine. The installation consists of 750 lines for automatic inter-communicating telephones, with exchange keyboards. In an interior of this kind sound-deadening is a most important consideration, and here Cabot quilting is used for the ceiling, acoustic plaster for the walls and rubber for the floors. This treatment is markedly successful. Inside the chamber the voice sounds strangely muffled, but on emerging into the untreated corridor outside, when the voice regains its true quality, the difference is strikingly apparent.

The building is well provided with staircases and lifts. Access to all departments is by a marble staircase, with a lift (and book lift) giving access to the offices on the Princes-street front on all floors; there is also a staff staircase with a lift in the north-east corner of the building, giving access to the offices and eleven floors of men's lavatories; then there are service stairs and a lift giving access to women's lavatories to all floors. Additional lifts are as follows: two central lifts and two lifts on the west side of the building; a directors' lift, giving access from the ground floor to the fourth and fifth floors only; and a book lift from the basements to the third floor.

The first, second and third floors are devoted to clerical, postal and supervisory work. It may here be mentioned that the present staff numbers about 1,600, and allowance has been made for 2,000 in the various arrangements of the building—heating, hot water supply, lavatory accommodation, ventilating and electrical plant, etc. In the planning of the first, second and third floors,



New Head Office of the Midland Bank, Ltd., Poultry, E.C.: Ground-floor Plan.

MESSRS. GOTCH & SAUNDERS (LAURENCE M. GOTCH, F.R.I.B.A.) with SIR EDWIN LUTYENS, R.A., Architects.

the factory principle has been followed, i.e., ample light and as little obstruction as possible of the floor space by columns, etc., the floors being divided to suit the requirements of the departments by low metal screens, which have many advantages, especially in regard to ventilation and light, over those that extend to the ceiling. The latter are, of course, necessary where privacy is essential, and to a certain extent keep out noise. The large number of tabulating and typing machines employed render the use of sound absorbing material essential. In the case of these interiors, Cabot quilting is used for the ceilings, and all noise is depressed and muffled. All furniture and equipment is of steel. The artificial lighting is of uniform character, being arranged so as to throw no shadows on books, etc. The fittings are of the semi-indirect kind with triple glass, in the order: white, blue, white—the bluish glass taking the reddish-yellow rays out of the electric light and providing an illumination comparable to daylight. All floors are of wood block.

A special note may be made of the screenwork lobbies to these floors, which have been especially designed by Mr. Laurence M. Gotch (who has been responsible for the design and equipment of these floors as well as other special work which will be noted later) to screen the draught from the lift and staircase well. They are of Burmah teak slightly waxed and rubbed up about every six months. Every pane of glass is uniform, thus facilitating replacement whenever such may be necessary. There is similar screenwork to certain of the offices, frosted glass being employed to just above head level for privacy, and clear glass above. Essentially practical in design, this screenwork has real decorative value, and adds a pleasing architectural touch to these large and businesslike interiors. The private rooms on certain of these floors have also been designed by Mr. Gotch, effective use being made of teak panelling, while the metal telephone boxes (on the third floor) are also to his design.

The fourth floor accommodates the managerial departments, which open off a delightful arched and vaulted corridor which makes a complete circuit of the building, the walls being of Portland cement plaster with a Keene's finish, stippled ivory white colour. Here, again, we have some attractive screen work. Some of the offices are panelled in teak and others in walnut. A typical room has a walnut dado, an electric fire, Roman stone lining to fireplace, and a bronze lighting fitting with cut crystal bowl.

Except in the case of the board-room, which was furnished under the direction of Sir Edwin Lutyens, R.A., Mr. Gotch was responsible for all furnishing throughout the building. He also selected the carpets, curtains, etc., and made suggestions and revised the maker's sketches for the furniture, most of which is of a comfortable eighteenth-century character without any suggestion of mere reproduction work.

The fifth floor, which may be described as the directors' floor, has been designed by Sir Edwin Lutyens. Here are the board-room, the directors' luncheon-room, smoking-room and lounge, chairman's luncheon-room, committee-rooms, etc., all treated in a refined version of English Renaissance. The board-room is a particularly fine apartment, over 70 ft. in length, having a segmental ceiling, walls panelled for about half their height in walnut, four marble fireplaces, and three handsome crystal chandeliers. This interior has been specially treated acoustically, and it is possible to converse in normal tones from opposite ends of the room. The vestibule to the board-room, also a fine apartment, contains a model of the building as it will appear when completed.

The directors' luncheon-room has black columns supporting a ceiling in the form of a central vault, and is richly decorated with carving in the Grinling Gibbons manner, while the directors' smoking-room has a quiet, rather subdued club-room-like character, in keeping with its purpose.

The sixth floor is devoted to the staff welfare department, which has been designed and furnished by Mr. Gotch. The staff luncheon-room (where luncheons on the self-service principle are obtainable at a very reasonable charge) has a decorative scheme of pale orange fading to sunset colour. Angles and skirtings are in black iron to protect the plaster from damage. All window frames are black and the curtains are of a rich jazz colour. Effective contrast is provided by the furniture, which is of plain oak, the seats to the chairs being of red Rexine. Artificial lighting is by means of fittings of obscure glass, circular in shape, with a glass dome in place of the usual "gallery."

The smoking- and coffee-room adjoining has comfortable wickerwork chairs of a dull gold colour and green coloured tables, this furniture forming a pleasing contrast with the Columbian pine woodwork, which is treated with lime to lift the grain, and has a most attractive texture. The walls are covered with a golden bronze paper, and the coved plaster ceiling has a sunset cloud effect. There is also an annexe for games, changing-rooms, etc. The whole decorative scheme has been most carefully thought out, and this series of rooms, with its fully equipped kitchens, caters very thoroughly for the welfare interests of the bank staff, who appear to take full advantage of the various facilities provided.

Special mention must be made of the staff staircase, which has a simple yet attractively designed wrought-iron balustrade, with a copper finished handrail and York stone steps to prevent slipping. From this staircase access is obtained to the men's lavatories, of which there are eleven, all in mezzanines—that is to say, three floors of lavatories to every two floors of the building. The women's lavatories are grouped separately. Each member of the staff has his or her own private locker, of which there are nearly 2,000.

Special attention has been given by Mr. Gotch to the design of the lavatories. Those for the general staff have an attractive stuc finish, with composition floors having brass strips to prevent cracking. The whole interior may be conveniently cleaned down with a hose. The managers' lavatories are generally similar, but have silver and black inlay panels on the walls, providing a quiet decorative effect. The directors' lavatories are of somewhat more elaborate design, having black Cecilian and white statuary marble floors, white cloudy Breschia for the walls and chromium-plated fixtures.

The ventilating system of the building is designed to supply fresh air and extract exhausted air for basement and ground-floors; above, it operates as an extract system only, the windows being depended upon for the supply of fresh air.

The erection of this great and complicated building has been carried out under very difficult conditions, operations having had to be conducted without interruption of the bank's business. That it is now approaching successful completion is a great tribute to the ability of all who have been associated with the work.

Disposition of Departments.

The disposition of departments on the various floors is as follows:—

Third Basement.—Engineering department, including boiler-room, ventilating chamber, engineer's workshops, messrooms, etc.; also filing accommodation and spare strong-room.

Second Basement.—Strong-rooms, stationery store, and further filing accommodation.

First Basement.—Renter safe deposit, including corridor, interviewing-rooms and inquiry counter in connection with same; further strong-rooms, and lavatory accommodation for staff.

Ground Floor.—Banking Hall: Poultry section; travellers' department, new issues, securities, registrar, etc., manager's office and waiting-rooms. Princes-street section: Poultry and Princes-street branch bank, stock office, etc.

Ground and First Floor Mezzanine.—Telephone exchange.

First Floor.—Clearing house, correspondence department, registrar, trustee and executor, and private rooms in connection therewith.

Second Floor.—Country and branch clearing, staff department with private offices, chief accountant, coupons offices.

Third Floor.—Branch superintendents and head office bills.

Fourth Floor.—Managerial department, including offices for chairman and managing directors, their secretaries, the joint general managers, and assistant general managers; offices for the secretary to the bank, intelligence department, general managers' assistants (Princes-street front).

Fifth Floor.—Directors' department: including board-room, committee-rooms; directors' luncheon-room, smoking-room and lounge; chairman's luncheon-room and sitting-room; kitchen offices; also premises department and chief inspectors' department.

Sixth Floor.—Staff welfare department, dining-room, smoking-room, staff committee room, changing-rooms and kitchens.

Following is a list of contractors employed on the work:—Messrs. Holland and Hannen and Cubitts, Ltd., building managers; Messrs. Rice and Son, Stockwell, builders; B. Goodman and Co., Ltd., demolition and excavation; Rice and Sons, Ltd., brickwork and general joinery; Redpath, Brown and Co., Ltd., steelwork; the British Reinforced Concrete Engineering Co., Ltd., and the Excellence Reinforced Concrete Co., Ltd., reinforced concrete floors and raft; Middleton Fireclay Co., Ltd., Eastwoods, Ltd., and the London Brick Co., bricks; the Adamite Co., Ltd., waterproofing; F. J. Barnes, Ltd., stonework; the Chatwood Safe Co., Ltd., strongrooms; Higgins and Griffiths, Ltd., electrical installation; Metro-Vick Supplies, Osler and Faraday, Ltd., Ingram and Kemp, Ltd., General Electric Co., Ltd., and J. M. Doughty and Sons, Ltd., electrical fittings; Ruston and Hornsby, Ltd., boilers; C. A. Dunham and Co., Ltd., and Comyn, Ching and Co., Ltd., heating installation; Le Grand, Sutcliff and Gell, Ltd., and the Becco Engineering and Chemical Co., Ltd., artesian wells and water treatment; Stitson, White and Co., Ltd., drainage and sanitary work; Wm. Nicholson and Son, Ltd., and F. Tibbenham and Co., walnut, teak, pine and oak panelling; Wm. Nicholson and Son, Ltd., walnut counter and screens; Benham and Sons, Ltd., and J. and E. Hall, kitchen apparatus and refrigerating plant; H. T. Jenkins and Sons, Ltd., and Art Pavements and Decorations, marble work; Diespeker and Co., Ltd., and J. Whitehead and Sons, stucwork; Wm. Nicholson and Son, Ltd., wood flooring; Geo. Jackson and Sons, and Chas. Wheater, plastering; the Birmingham Guild, the Tudor Art Metal Co., O'Brien, Thomas, Thos. Elsley and Co., and H. H. Martyn and Co., ornamental metalwork; Henry Hope and Sons, metal windows; Crittall Manufacturing Co., Ltd., lantern lights; Chas. Smith and Sons, locks and door furniture; Marlev Bros., drawers and screen locks; Automatic Sprinkler Co., Ltd., fire-fighting apparatus; the Sturtevant Engineering Co., Ltd., ventilating and vacuum cleaning plant; the London Spray and Brush Co., Ltd., painting; Carter and Co. and Diespeker and Co., Ltd., tiling; Geo. Farmiloe, James Clark and Co., Ltd., John Hall and Co., Luxfer, Ltd., T. and W. Ide, and Alfred Goslett and Co., glass; Express Lift Co., Medway Lift Co. and A. and P. Steven, Ltd., lifts; J. W. Gray and Co., lightning conductors; Ioco Rubber Co., Ltd., rubber flooring; H. H. Martyn and Co., stone and wood carving; May Construction Co., Ltd., acoustic quilting; Val de Travers Asphalte Co., Ltd., asphalting; Roneo, Ltd., and Harris and Sheldon, Ltd., metal fittings; Wm. Nicholson and Son, Ltd., boardroom furniture, Morris-Singer and Co., bronze doors; Gladwell and Kell, general ironwork; Fenning and Co., marble fireplaces.

THE ARCHITECTURE OF THE THEATRE IN AMERICA.—XV

By E. WAMSLEY LEWIS, A.R.I.B.A.

BUILDING REGULATIONS IN THE UNITED STATES.

Most American cities have building codes requiring similar conditions for exits, stairs, spacing of seats, steppings of balcony, width of aisles, open courts, and fireproof construction. A fire curtain is always asked for. The stage skylight and ventilator, fire extinguishers, sprinklers, and stand-pipes are also required in all districts. In Chicago, Philadelphia, and Boston, the boiler-house is permitted under the building, but in New York, New Orleans, and San Francisco it is not.

Mechanical ventilation is in general use in all parts of the States, the building codes generally demanding it for every occupied room in every public building. There is a provision of not less than two cubic feet of fresh, uncontaminated air per minute for each square foot of floor surface, unless the unoccupied space of such rooms exceeds one thousand cubic feet for each occupant, and windows are provided opening directly upon a street or court.

Water-closets and toilets may be mechanically ventilated to provide not less than four changes of air per hour. Thus, these and other rooms may be tucked away under the auditorium or within the thickness of the balcony without difficulty and so considerably ease the planning of the theatre. From a regulating point of view, mechanical ventilation is more efficient for toilets. No law can keep open windows which may be shut when the human element so wills.

All working stresses and the factor of safety for various materials are laid down in the building codes. They allow for much lighter building than is permitted in England, and consequently the cost of the building is lessened. In America I have seen a 16 in. by 16 in. section stanchion doing exactly the same work and in a similar position as one in England as big as 25½ in. by 24 in. English steel-framed structures, before clothed, stand out as gloating symbols of inefficiency. The standard size of an American brick being 8 in. by 4 in., a standard wall one brick thick is one inch narrower than such a wall in England, and is, therefore, proportionately lighter.

Although it is generally supposed here that the factor of safety for American buildings is less than obtains here, in fact exactly the same allowance is made in both countries. The relation of allowable unit stress to ultimate strength is 1 to 4 for metals, 1 to 6 for timber, and 1 to 10 for brick or masonry.

Live Load.

The floors of that portion of the building devoted to the public are designed to take a live load of 90 lb. per square foot of area in New York, and 80 lb. is the rate in some American cities, whilst 112 lb. per square foot is the regulation in England. In domestic work the live loads vary more considerably, being 40 lb. per square foot in America and 70 lb. in England.

In America generally, in estimating the necessary strength required for the floors in a theatre, the following live loads are reckoned for:—

Lobbies, corridors, stairways	...	100	lbs.	per	sq.	ft.
Auditorium and balcony	...	80	,,	,,	,,	,,
Stage	...	250	,,	,,	,,	,,
Scene dock	...	100	,,	,,	,,	,,
Property room	...	150	,,	,,	,,	,,
Grid	...	70	,,	,,	,,	,,
Roof	...	40	,,	,,	,,	,,

Bearing capacities of the soil are reckoned at the following rates to the superficial foot:—

	In America.	In England.
Soft clay ...	1 ton	1 ton
Firm clay ...	2 ,,	2 ,,
Compact gravel ...	6 ,,	4 ,,

Bearing of brickworks in cement mortar per sq. in. is reckoned at 210 lbs. in America and 125 lbs. in England.

Working stresses for rolled steel are in pounds per sq. in.:—

	In America.	In England.
In compression ...	16,000	16,800
In tension ...	16,000	16,800
In shear	10,000	12,320

Wind pressure is calculated rather differently in the two countries, although the same rate, 30 lbs. per sq. ft., is used in both countries. In America, all buildings over 150 ft. in height and all buildings in which the height is more than four times the minimum horizontal dimensions are designed to resist wind pressure over every square foot of exposed surface from ground to the top of the structure. In England all steel-frame buildings are designed to resist wind pressure, whatever their height may be, unless it can be proved that the pressure does not increase the stress by more than 25 per cent., when only the upper two-thirds of the surface are calculated for.

The following table shows the regulation weights in lbs. per cubic foot for various materials in the two countries:—

	In America.	In England.
Brickwork ...	120	112-150
Limestone ...	156	140-170
Sandstone ...	144	130-150
Concrete ...	144	120-140
Granite and marble ...	168	140-190
Oak	48	48- 54
Spruce	30	30- 44

Protection against Fire.

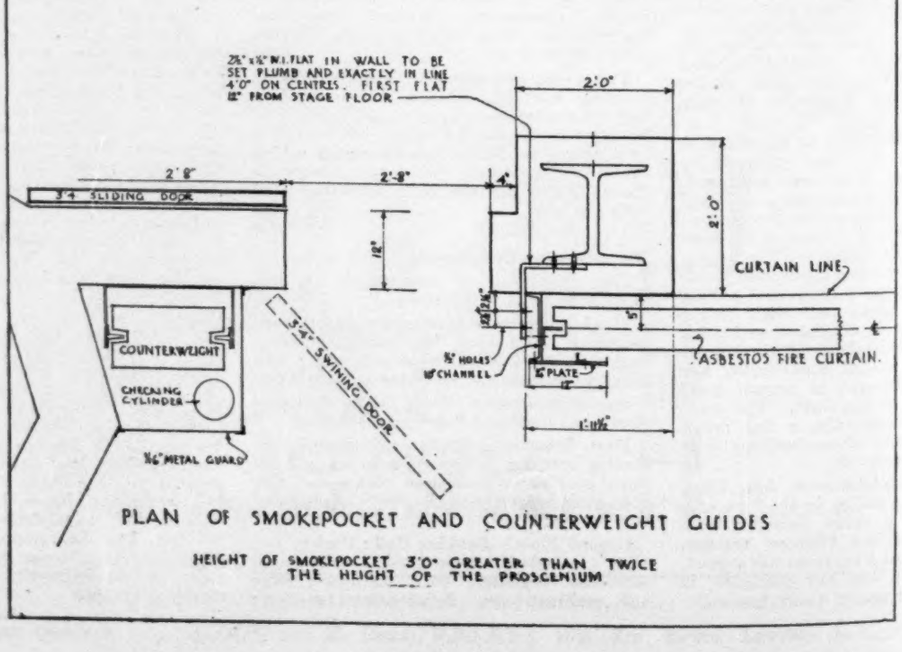
As in England, plans for any projected theatre have to be approved by the Fire Department, who have regulations for widths and numbers of exits, passage-ways, stairways and aisles, and for lighting and heating equipment, to facilitate egress in cases of fire or accident and to afford the requisite and proper accommodation for the protection of the public.

Diagrams of Exits on Programmes.

In New York it is directed that a diagram or plan of each tier showing distinctly the position of the exits shall be printed on each programme of the performance, with the motive that patrons should on first finding their seats make a note of the exit nearest or most convenient for them, so that in case of emergency they can go directly to it.

Exits.

All exit doors are plainly marked with exit signs and red lights. The laws in America for exits are very similar to those in force in England. One of the inferior features that I have noticed in America is the fact that two or more ways of exit from different parts of the house are allowed to converge into a single passage or



stairway, so presenting the possibility of a jamb when a crowd is endeavouring to escape rapidly. I noticed in the case of one building, only recently erected in the heart of New York, a single exit stair serving as an escape for both an office block and a theatre balcony. In America the use of external exit stairs is much resorted to, saving much space within the confines of the building, but making a very ugly and untidy feature on the external walls.

Seating.

A certain degree of comfort is assured the patrons of the New York theatre in that seats must not be less than 32 in. back to back. In Chicago the distance is greater still, being 34 in., whilst in Boston, Philadelphia, New Orleans and San Francisco, 30 in. back to back is permitted. In London the minimum distance allowed between rows of seats back to back is as little as 28 in.

Fire Appliances.

In New York and Boston and most American cities there are certain defined positions for stand-pipes with hose attachments. One on each side of the auditorium on each tier and one on each side of the stage at each level. Sprinklers are required as in England, but whereas in England only connection to a main with suitable pressure is asked for, American building codes require that the sprinklers be supplied from a tank on the roof over the stage. These roof tanks can be seen everywhere in American cities, and they mar the complete effect of many of the finest buildings.

Fire Curtain.

The proscenium opening must be provided with a fireproof curtain of metal or asbestos, which must be capable of withstanding a temperature of 1,700 degrees Fahrenheit, for a period of 45 minutes. An additional line of sprinklers is placed on the stage side of the proscenium opening.

Fire Hose.

Stand-pipes, 4 in. in diameter, with hose attachments, are provided on each side of the stage, with outlets on every floor and gallery, from under-stage to rigging loft; one stand-pipe on each side of the auditorium with outlets at each tier from cellar to gallery; one in the property room and carpenters' shop.

Stairs.

Stairs open on one side are permitted within the auditorium to serve the first balcony, but other internal staircases must be enclosed within fireproof walls. All stairways from balconies must go directly down to the street, but must not communicate with the basement. Where the seating capacity does not exceed 1,000 people, only two direct lines of stairs are required, one on each side, to extend from pavement to the uppermost gallery with outlets from each intermediate gallery to each staircase. Stairways for the use of the audience must be at least 4 ft. wide, treads must not be less than 10½ in. wide, and risers must not exceed 7½ in. No circular or winding stairs are permitted

Fire Underwriters.

All plans of projected theatres must be passed by the fire underwriters. They have their own regulations as to walls, fire doors, sprinklers, etc. They demand that the stage should be cut off from the auditorium and the dressing rooms by 12 in. brick walls, with no opening to the auditorium above the stage level. Other openings must be protected by a labelled fire door on each side of the wall at each opening. In case of offsets, the horizontal cut-off must be by a 12 in. concrete slab. Any ducts passing through the proscenium walls should have iron boiler dampers on each side of the wall.

Carpenter, paint and electricians' shops should be cut off by 12 in. brick or reinforced concrete walls and a 12 in. concrete ceiling and with double labelled fire doors at openings. If the rooms are supplied with sprinklers the walls may be 8 in. thick and only a single door provided at the openings.

[Owing to a typographical error the dimentions of the locker cupboards referred to on page 677 of last week's issue under "Musicians' Room" were wrongly given. The correct dimensions are 12 in. by 15 in. by 6 ft. high.]

(*Concluded.*)

CORRESPONDENCE

(*Continued from page* 703.)

in the course of the year, not five per cent. is sold as best, nor over ten per cent. as seconds. Many architects for public buildings, such as schools, are now content to specify "good glazing quality."

Until the young estimator has learned to value the labour for himself, let him ask for alternative quotations for "glass cut to size and delivered to site," and "glazing complete"; he will find no difficulty in getting very close competitive quotations and will thus arrive at a standard labour value which he will need to vary to meet circumstances. To give him some idea, I may say that pre-war in London for very large quantities the price was sometimes a little under a penny per foot super for putty and labour, and that just recently it has been carried out on a housing scheme for just over three halfpence. On the other hand, it will be found that under ordinary circumstances the cost is much higher, and I have known an allowance of fourpence per foot to be insufficient when the quantities were comparatively small.

I give this pricing with some hesitation because of the danger that attaches to laying down labour units which may totally mislead some reader to his undoing. Accessibility, quantity, and several other factors govern labour values. I must therefore ask Mr. Cook to excuse me from going farther with his other problem than to say that where piecework still obtains, sheet-lead fixing is generally set at the same price per cwt for five or six pounds strength.

In conclusion, I venture to point out that on no occasion have I said that quantities based on the standard method are the last word. My plea is for uniformity. When all practitioners have come into line further progress may, and doubtless will, be made by general agreement.

J. R. Taylor.

Public Appointments.

In the course of a letter to the Editor a correspondent writes as follows:—

"As a subscriber to your paper, and as one who replies to several of the advertisements appearing under the heading of 'Public Appointments,' I have a complaint to make against your advertisers. When I apply for an appointment I always enclose typewritten copies of my testimonials and attach a stamped and addressed envelope with a polite request that the copies should be returned in the envelope. In no case has my request been acceded to. A set of copies of testimonials costs me 1s. I have since January applied for 15 positions of clerk of works which were advertised in your paper. The applications were all to public bodies and not one of them has returned my copies. That is very hard on a man who is out of work and who has to count every penny to make ends meet. I would suggest that you remind the advertiser that he has a duty to perform and that he has no right to purloin an unsuccessful applicant's testimonials when he receives the postage for returning them."

Royal Society of British Sculptors.

The following have been elected Associates of this Society:—Mr. Alfred Southwick, Mr. Donald Gilbert.

"THE BUILDER" DEBATE

XXXVIII.—EXEMPTION FROM THE FINAL R.I.B.A.

Sir,—Since "Negative" appears to have based fifty per cent. of his argument upon an analogy, after admitting that such things are deceiving, I cannot feel that I have a very strong case to reply to. The essential difference between the young architect and the young doctor of medicine is that whereas the former can practise before he is qualified, if he can get the work to do, the latter is debarred from practice as a medical man. The difference is so great that we can get no help at all from studying the other profession. All we need to do is to study the conditions of our own and discover, if we can, first, whether there is any advantage in early qualification, and second, whether there is any disadvantage to anyone in such a case.

Under the first head, it is obvious that if all young men of the required academic knowledge are permitted to qualify upon a basis largely academical, the whole currency of qualification is so much depreciated that any imagined advantages fade into the distance. As to the second, it is probable that the average young man is provided with a measure of false self-confidence by being stamped as the finished article while still in the raw state; and that he has lost the fine discipline of a later struggle which most of the previous generation had to pass through before they could declare themselves as fully qualified architects. I have already referred to the false impression which is advertised to the public when young men are given a qualification which has not been built up out of practical experience, and I can only repeat that qualification on such lines becomes in the first place a deception to the public, and later, when the latter has realised how little it means, it ceases to "cut any ice" at all. The latter is the state of affairs we risk if the present system is perpetuated, and I suggest that now is the time to draw the line, and even retrace our steps part of the way.

I have no grudge whatever against the schools, and I recognise in them a great advance in architectural training from the days when young men had to "scratch" for themselves. However, I believe that the influence of the schools has been definitely weakened in their pretensions to provide the complete architectural training from "a to z," and that their influence for good would be definitely increased by a syllabus of less ambitious scope. The craft of good draughtsmanship, an insight into the æsthetics of architecture, the theory of building construction and the elements of design can be efficiently taught within the schools, and a student who has passed through such a course of training is ripe to pick up the harder facts of architectural practice in the experience of office routine. But many a talented academic student has become broken on the wheel of experience, and it is not right that such men should be definitely earmarked for qualification after a perfunctory period of office service, until experience has proved them.

"Negative" may continue to disagree with me upon this matter, but he must not write me down as an enemy of the schools, because that is very far from the case. As a matter of fact, I believe the schools have few enemies, and am inclined to think that the most formidable of these are the schools themselves!

Positive.

R.I.B.A. Tite Prize.

Two students of architecture in the King Edward VII School of Art, Armstrong College, Newcastle-on-Tyne, Mr. D. L. Couves and Mr. J. C. Clavering, have reached the final stage of the competition for the R.I.B.A. Tite Prize.

INSTITUTION OF STRUCTURAL ENGINEERS

In a paper read before the Institution of Structural Engineers on April 9, Mr. F. E. Drury, M.Sc., M.I.Struct.E., said that training for a vocation fell under two heads: that supplied by the schools, and that gained as a junior or assistant in the profession. Entry into the profession of structural engineering was usually direct in the case of university trained men. In the larger technical colleges, day courses provided a similar general groundwork of training to the universities, though perhaps in a more restricted and specialised manner, with a fuller vocational bias. Such courses were suitable for students who, at the age of sixteen, had at least passed the school certificate examination. Complete courses in structural engineering, with definitely organised training extending over a period of years, were an established feature in the building departments of several colleges, and very satisfactory work of a fundamentally sound character was being done. Some institutions had both day and evening courses, while others had evening courses only.

In all these cases structural engineering as a subject commenced from a building groundwork, which was a very acceptable basis. The work of the modern structural engineer was very definitely and in a large proportion related to building. Steel-framed structures were today the staple work of the structural engineer. The steel work was related to and often conditioned by the architectural construction, and many benefits in the direction of future collaboration would accrue from an educational training in which building formed an introduction to, and then proceeded alongside the instruction in, structural engineering. Adequate provision should be made for those youths who entered drawing offices—perhaps in a semi-professional way—as learners at the age of sixteen upwards, and sought an opportunity to study with a view to qualifying for something higher than the post of draughtsman. They began work as junior draughtsmen, and hoped to secure facilities for learning the principles of structural design. If they developed into good draughtsmen and detailers and showed that they had gained some sound fundamental knowledge of structural principles, they might be given the opportunity of transfer to the designing department of a specialist firm, and so get a foothold on the ladder of a good profession. Quite the larger proportion of boys who entered in this way at present were drawn from secondary and junior technical schools, and he had evidence from many quarters that the latter type of boy had found much favour with employers.

However we might favour full-time educational training for entry to professional work, it was to be hoped that we were generous enough to encourage every youth who could prove his worth, and to try and secure that, for those who could not take advantage of full-time training, adequate opportunity for education in some other form should be available; or if day training had been of a vocational character, but short and incomplete, that opportunity for continuance and completion should be available. For the sake of the profession one would like to try and ensure that, where the local and special needs of the structural engineering industry justified it, there should be available at least a complete part-time course by means of which all the necessary vocational training might be available up to the standard of the associate-membership examination.

The aims of early professional training should be (a) To obtain a knowledge of all the fundamental laws which governed structural work, and which had been verified so often as to leave us in no doubt as to their truth. (b) To become capable of realising the general conditions of any normal problem and thus approach its solution with confidence. (c) To become capable of recognising unusual or new conditions in a problem and to bring sound and logical reasoning to bear upon its solution, and possibly to change its conditions to secure economy. (d) To be able to relate practical conditions to accepted basic theories and to recognise the limitations of a theory in its application to new ideas, in practice.

The great engineer was usually the man who successfully forecast the conditions under which his structure would function, and the most suitable form and material to adopt, and could therefore provide for its construction with due economy. It was this facility to visualise and comprehend the needs and conditions of practice, including all fabrication and erection, which advanced vocational training should encourage. Mere discipleship of any individual or school would not achieve the desired result however eminent the authority might be. Personal thought and open discussion were necessary, and could be obtained by combined study; pooling of daily experience and knowledge garnered from any source was easily arranged, and where combined study was done in a class, the teacher then acted as introducer, leader and controller of debate, during such time as might be allotted for the purpose.

CHARTERED SURVEYORS' INSTITUTION

In a paper before this Institution, dealing with the "Uniformity in the Valuation of Property for Rating Purposes," Mr. James R. Toovey, P.A.S.I., said that the Central Valuation Committee was set up in 1926 under the powers of the 1925 Act with the express object "of promoting uniformity and removing inequalities in the system of valuation." It was never contemplated, said the lecturer, that the Central Committee should attempt to provide any mathematical help in valuation, and, generally speaking, this had been studiously avoided. On the few occasions, however, when figures had been given, he feared it had militated against uniformity in valuation. As an instance, in Resolution No. 10 (ii. and iii.) it was suggested that 5 per cent. and 10 per cent. should be added to leasehold rentals to cover the cost of internal or internal and external repairs, when liability rested upon the tenant, to arrive at gross value. Those percentages were in use before the War, and might then have been approximately correct. But in 1929, at the London Assessment Conference, attention was drawn to this recommendation, and a resolution was passed to the effect that the percentages were inaccurate. It was unreasonable to add, say, 10 per cent. to a leasehold rental of £50 when the allowance for the same purpose, together with a small amount for renewal, was £10 (Schedule 2 (Part 1)). As the rental increased, the disparity became more marked. The same criticisms, already well known, applied to this rule of thumb as applied to the deductions from gross value to rateable value under the Schedule. He himself found, in fact, particularly with regard to mansions, that some valuers always worked on rateable value, because the terms of letting were invariably on a rateable value basis, and the expenses of repair and insurance exceeded both the suggested 10 per cent. allowance and the schedule deduction.

As to the County Valuation Committees, those Committees were constituted under the compulsory powers of Section 18 (i.) of the 1925 Act, and comprised members of the County Council, together with members of the Assessment Committees within the county. The County Rates Act of 1852 directed that the expenses of the county council should be precepted to each parish in the county, and appeal was possible by the overseers to the county council on the ground of over-assessment of one parish or the under-assessment of another parish. It was possible to prosecute this appeal to Quarter Sessions. This procedure was now, of course, abolished by the Rating and Valuation Act, 1925, and the guardianship of equality of assessment had passed from the overseers to the county council. Hence the urgent necessity for every County Valuation Committee to continue the protection of every ratepayer and every parish which for over 70 years was the responsibility of the elected overseers.

One heard criticism as well against as for a County Valuation Committee, which was alive to its responsibilities, more often in the manner of the prosecution of their duties; but he was definitely of opinion that in those counties where the Rating Authorities and Assessment Committees combined in a happy relationship with the County Valuation Committee, then much had been done, and would continue to be done, in the direction of uniformity of assessment.

The late George Nelson, A.M.I.C.E.

The death has occurred, after a brief illness, of Mr. George Nelson, A.M.I.C.E., aged 62, who was for over 20 years engineer and surveyor to Gosforth-on-Tyne Urban District Council. Mr. Nelson performed valuable work in connection with the Coxlodge and Kenton housing schemes.

The "Sunlit" House at the Ideal Home Exhibition.

(See pages 725 & 726)

THE IDEAL HOME EXHIBITION

THE Ideal Home Exhibition, which, organised by the *Daily Mail*, is now being held at Olympia, maintains its usual high standard of attractiveness and general interest. It is well laid out and, in the Grand Hall at least, the stands follow a pleasing uniformity of design and decorative treatment. A novel and effective lighting feature is the continuous line of glass channel enclosing electric light, crowned by a simple coved cornice. There is a varied display of exhibits of architectural, decorative and building interest, as well as a furniture section, and the gardens are again a delightful feature of the exhibition. The houses shown in the National Hall are well up to standard, and one of the most interesting examples is the ferro-concrete house by Mr. T. D. McLean in collaboration with Mr. D. G. Tanner, F.R.I.B.A. The actual construction has been planned to exclude features which create work for the housewife. Architects should note the flooring to the sun-terrace on the second floor and the loggia on the ground floor—designed and lined out to represent stone flooring by the Athena Composition Flooring Co., of Chiswick.

The sun-centre house in the National Hall for the Universal Housing Co., Ltd., Rickmansworth, (see below) has the front elevation comprising sun porch and sun-sleeping balcony, especially adapted to the English climate. The exterior surface is covered with "Snowcrete," smooth surface. The double doors to the porch and sun-sleeping balcony are of a detachable type. With the white elevation and green shutters this gives a very pleasing effect. The lounge hall is carried out in Spanish style with exposed beams and staircase to correspond. The lounge is panelled out to a height of 6 ft. 6 in., with a plaque rail with double glazed doors into the study. The study is equipped with fitted bookcases to walls, with parquet floor and exposed joists at ceiling. The kitchen is fitted up in the most modern way for convenience with a built-in refrigerator, water softener and fitted "easy-work" cabinet with service hatch, the gas cooker and boiler being in a tiled recess. The dining-room is carried out in the Georgian style. A main feature of the house is the two bathrooms. The entire cost is £2,640, with cavity walls or in a patent construction for £2,350, erected in any part of the country.

One of the more imaginative exhibits is "Behind the First Floor Back" (Empire Hall, first floor). Here Mrs. Darcy Braddell has shown a number of ways in which the ugly flat roofs known as "leads" can be converted to useful and attractive purposes by simple schemes of decoration and sliding or folding partitions. Among the firms associated in the work are: Pilkington Bros., "Vita" glass; Merchant Trading Co., Ltd., "Salubra" washable wallpapers; W. N. Froy and Sons, Ltd., shower-bath, etc.; Educational Supply Association, "Esavian" partitions, etc.

A product which will interest painters and decorators will be found on Stand 229, Gallery, Grand Hall. Here the Anglo-Colonial Trading Corporation, Ltd., display "Silver Fleece" steel wool. This product, made in ten grades from finely tempered steel, can be used wet or dry for rubbing down paintwork, cleaning off joinery and cleaning and burnishing metal and machinery; in fact, as an alternative to sandpaper and pumice. Economical in cost, it can be used till worn away, and results we saw were very satisfactory.

A new idea in unit building construction is shown by Messrs. Boulton and Paul, Ltd., on Stand 190, National Hall. For use particularly for such buildings as parochial halls, schoolrooms, Scout-halls, cabins, work- or rest-rooms, nurseries and playrooms, and bungalows, this plan of portable buildings, made on Boulton and Paul's "Multiple Unit" system of standard wall sections, appears to us to have many advantages. The example shown is neat, weatherproof, and built of sound timber, and can be easily erected by builders where desired. On Stand 86, Grand Hall, the same firm display their fully automatic "Electrolite" light and power plant. Ingenious arrangements are incorporated by which, by merely switching on the light in the house, the motor starts up automatically when five 25-watt lamps are on and stops automatically when the lighting is reduced to two 25-watt lamps. A very neat and effective all-British job, suitable for a house with forty to fifty lights.

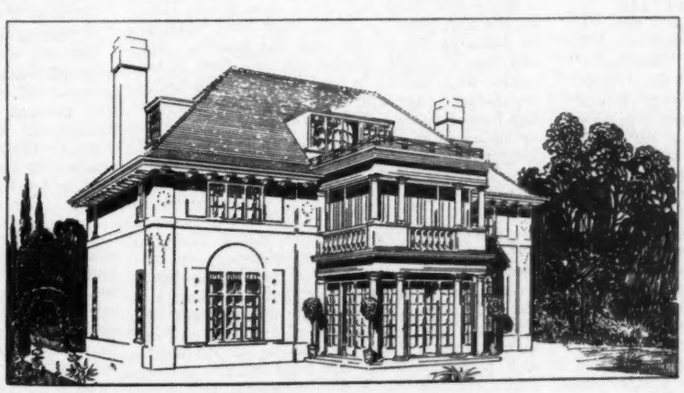
Messrs. Bratt, Colbran and Co. and the Heaped Fire Co., Ltd., on Stand 98, Grand Hall, show their usual exhibit of high-grade fireplaces, many of them with architecturally designed surrounds. The "Heaped" fire, the firm's speciality, can be seen in action, and some delightful and efficient electric radiators will particularly catch the architect's eye. For bedrooms, a novelty is the combination grate whereby, in the event of the room being turned into a sickroom, the electric fire can be taken out of its surround and the fireplace used in the ordinary way for coal.

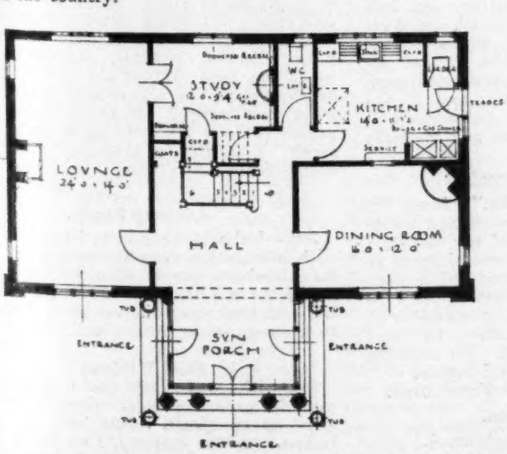
A variety of old English fireplaces, sundials and garden work, all hand made, is shown by the Claygate Brickfields, Ltd. (Stand 81, Grand Hall). Sand-faced briquettes and moulded bricks, in a selection of the eighty different moulds used, are also exhibited, as well as standard and 2-in. facings in mottled and red colours. An interesting display is made of fireplaces in which cast Portland stone and sand-faced briquettes are employed.

The charm of leaded windows is very real, and for the modern home gives a setting which increases the decorative value of furniture and decorations, and adds tone to the house. Some good examples of leaded windows are to be seen at Stand 180, National Hall—that of Messrs. Daye, Cox and Coggin, Ltd. They are built weatherproof, reinforced with a concealed steel core, and the panels can be supplied in "Vita" glass if desired.

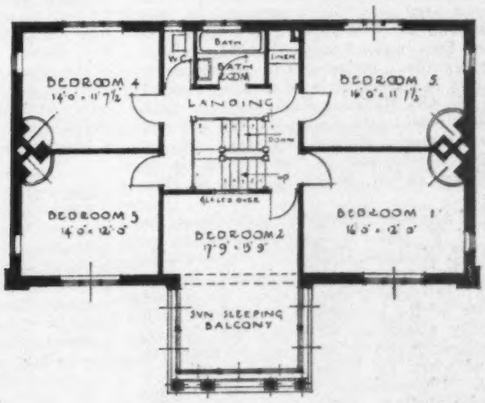
The architect for the small house will be interested in the "Hurro" hot-water circulator shown by the "Hurry" Water Heater Co. on Stand 93, Grand Hall. This is a small machine for attachment to any ordinary hot-water circulating system to heat the water by gas when the coal fire is not in use. It is also useful for radiation and industrial purposes. Also shown is the "Hurry" dual-purpose gas-heated copper, which every architect for housing schemes and Council housing should inspect.

Refrigeration is rapidly becoming a standard fitting in the modern house and flat. The "Kelvinator" models on view at Stand 84, Grand Hall, include two or more models of the "Yukon," the most recent





:THE GROUND FLOOR PLAN



:THE FIRST FLOOR PLAN:

The "Sun-Centre" House, Olympia. MR. ARTHUR R. A. BLAY, A.I.A.A., Architect.

domestic model available in two sizes—5 ft. and 7 ft. food storage capacity; various models of the "De Luxe" and the "Standard" domestic lines. A service cabinet is exhibited, specially designed for small restaurants, hotels and country houses.

A comprehensive display of Rawlplug specialities is to be seen on the stand of the Rawlplug Co., Ltd. (85, Grand Hall), including some extremely interesting moving exhibits, designed to demonstrate the action of expansion which takes place when a screw is driven home into a Rawlplug. Attractive ranges of bathroom fittings in aluminium, vitreous porcelain, white enamel and chromium are also shown. We learn with interest that the overseas business of this company is developing rapidly.

Messrs. Parker, Winder and Achurch exhibit on Stand 89, Grand Hall, in addition to a varied display of combination grates, their "Parwinac" automatic oil burning heater, an apparatus which enables the user to burn cheap, semi-crude oil in the boiler of a central heating or domestic hot-water supply system. The advantages derived are, briefly: perfect control of room or hot-water temperatures to the exact degree required; elimination of stoking; cleanliness of the boiler-house and the convenience of being able to turn on the central heating with the same facility as electric light

Kitchen ranges of varied description are shown on the stand of Messrs. Smith and Wellstood, Ltd. (92, Grand Hall). They are finished in the firm's new "Bonamel," which dispenses with blackleading, and is heat resistant. Both the "Wellstood" range and the "Columbian" portable cookers, burning almost any fuel, can be supplied in this finish. Other varieties of stoves are included, as well as several patterns of boilers for domestic hot water supply.

Modern ranges, grates, stoves, etc., are exhibited in wide variety on the stand of Messrs. Samuel Smith and Sons Ltd. (94, Grand Hall). Special attention may be drawn to two combination grates specially suitable for small houses—the "Foresight" grate, solo oven and boiler, and the "Mity-oven" combination, with swing trivets. Each is a very compact and efficient piece of apparatus, having a coloured tile surround.

The well-known "Ure" back-to-back grate and the "Ure" interior cooker are exhibited in various styles and finishes on the stand of Messrs. Allan Ure and Co., Ltd. (117, Empire Hall). The advantages of the back-to-back grate are that it not only heats the living-room from its open fire, but cooks perfectly and supplies abundant hot water on the scullery side. Requiring only one flue, it is a most useful fitment for small houses.

The diverse applications of gas are effectively shown on the stand of the London Gas Exhibit Committee (136, Empire Hall), which has been very attractively designed by Mr. Walter Tapper, A.R.A., P.-P.R.I.B.A. Gas cookers, fires, water heaters, lighting fittings, etc., of excellent design and proved efficiency are shown in attractive variety. The "Sunlit" House, in the National Hall (see page 725), has been completely equipped with gas and deserves a special visit of inspection. One interesting development in gas lighting is its control by switch, in the manner of electricity.

One of the most interesting exhibits at the stand of T. and C. Associated Industries, Ltd. (172, National Hall), is a transportable house. Built on the unit principle, it consists of interchangeable panels, doors and windows, with a sectionised roof, all of which are easily assembled without skilled labour. No framework is required. Special doors are supplied when the house is to be used as a garage. Chequerboard fencing and screening, osier shelters, settees and garden tables and chairs are also shown.

The "Hush-Hush!" house, designed by Mr. A. Trystan Edwards, A.R.I.B.A. (198, National Hall), is interesting as showing how a house can be planned and constructed so as to eliminate as far as possible all outside noises. The house is of brick, lined with "Treetex" heat-insulating and sound-deadening wall board, and one of the most interesting interiors is the "Silent Music Room," which is lined with "Cabot" sound-deadening quilt. Messrs. W. T. Lamb and Sons are responsible for the fireplaces in the house, all of which are of attractive design, those on the ground floor being of brick, for coal fires, and those in the bedrooms and nursery in glazed tiles for electric fires.

One of the most picturesque houses in the National Hall (Stand 200) is the Lovell Maplescombe House, designed by Messrs. A. L. Abbott and Douglas G. Tanner, FF.R.I.B.A., and erected by Messrs. Y. J. Lovell and Son. Designed to meet the needs of a small household, it is planned on straightforward lines without waste of space, and incorporates all essential labour-saving devices. Prospective house builders should not fail to visit this convenient and well-appointed house.

"Triumph" kitchen cabinets and utility furniture are well displayed by Messrs. Manuel Lloyd and Co., at Stand 315, Gallery, Grand Hall. Special attention may be directed to the "Doric," an oak-fitted cabinet designed for maximum capacity—with minimum floor space; and to the "Classic" table model, a useful combination of cabinet and table, specially designed for use where space is very limited. The table, which has an enamelled top, is supported by legs fitted with rubber-tyred wheels, enabling the entire top to slide out, forming a rigid and convenient table for working or occasional meals.

The problem of fire protection at such a vast exhibition as this is a considerable one. The following facts were given in an interview with Mr. C. J. Kavanagh, Director of the British Steelwork Association:—"During my visit to the exhibition a feature which struck me as being of very great interest to organisers of exhibitions throughout the world was that some 10,000 sq. ft. of steel sheets have been used in the panelling of the stands in the Great Hall. This panelling has been installed in consultation with the London County Council to eliminate fire risk in the exhibition. There is, as in all exhibitions, a vast amount of muslin and scenic work at Olympia, and apparently the London County Council have for many years had in mind the possibility of fire risk arising therefrom. We understand that the L.C.C. are satisfied that the system at present used here obviates the risk. In the very unlikely event of fire appearing in an exhibition where the stalls are constructed of fire-resisting materials other than steel sheeting, the firemen are always faced with the difficulty that an axe used to remove a partition in danger becomes bound up in the material and is difficult to remove, whereas in steel sheeting a moderate blow removes a panel without interfering with the freedom of action of the fireman. The advantages in the interests of public safety of using steel sheets in this connection must be obvious, because in all exhibitions and large halls where stands are erected there are artificial currents of air set up by reason of the location of the stands, and such currents of air would cause a fire to run quickly along the whole length of stalls, whereas with steel sheeting the fire is prevented from spreading because the areas are broken up by this completely fire-resisting material."

ARCHITECTS' & BUILDERS' INQUIRY BUREAU

Wood Block Floor.

[Reply to "H. H. O. N.," March 27.]

Sir,—The floor may have been badly laid in the first place, or damp may have worked in between the blocks and the mastic. In any case it would appear that the floor is in a bad way, and it is probable that the only satisfactory cure will be to take up and relay the floor entirely. This should be done by a specialist firm. The use of grooved and tongued blocks is good practice, as obviating the loosening and lifting of blocks in the future.

PRACTICE.

Defective Flooring.

[Reply to "Suburban." March 27.]

Sir,—There is no more refractory wood than maple, and its power of pulling against fixings under unequal shrinkage is remarkable. It is probable that the central heating dried out the top surface of the boards too quickly, there being a cushion of stagnant and probably damp air between the joists under the boards. I would suggest that the skirtings be taken off and the floor cut half an inch clear of the walls all round, the skirtings being then re-fixed with, say, a quarter gap under. This will give the warmed air of the rooms the chance of circulating through the spaces between the joists, and if the latter have not become set in distortion, it is possible that they may recover and maintain a true surface.

PRACTICE.

Covering a Water Tank.

[Reply to "Water Engineer." April 3.]

Sir,—I am not quite clear what your correspondent requires, but should say that the type of covering composed of several layers of bitumenised felt laid in bitumen and covered with ½ in. to ¾ in. tar-macadam is the type sought. This is now executed by a number of reliable firms, including many who have hitherto specialised in asphalt. The covering can be laid on concrete or wood boards.

FLATROOFER.

Reservoir Question.

[Reply to "Reader." April 3.]

Sir,—Clay is the right substance to use for the purpose, but it may be necessary to interpose some filtering medium before the springs enter the tank, though any suspended clay will settle to the bottom eventually if the tank is allowed to settle.

PUDDLE.

"Peeling" of Ceilings.

[Reply to "Ceilings." April 3.]

Sir,—It would appear that even now the original whitewash has not been thoroughly scraped off. The slightest residue of lime will prevent adhesion of subsequent coats of distemper. Your correspondent does not state whether the walls also were originally whitewashed, as that would equally account for the peeling by the chimney breasts.

SCRAPIT.

Waxing Brickwork.

Sir,—I should be glad of advice from a practical man as to the behaviour of beeswax and turpentine upon external brickwork. I have recently had a brick fireplace built in cement compo. and waxed. The effect is delightful, quite in the tone of old brickwork in mortar, but with softer effect. It has occurred to me that the same treatment in external work would obviate all the defects of brickwork in compo, viz., efflorescence and cold effect, and would permit the building of solid work without fear of damp penetrating. I am doubtful, however, whether the wax would not tend to melt out in hot sun and eventually lose its nature as a waterproofer. I am also doubtful whether in the mass an unpleasantly "shiny" effect might not result. I should be extremely grateful for authoritative views upon this proposal.

EXPERIMENT.

Advisory Panels.

Sir,—I should be glad to be put in touch with information upon the working of voluntary advisory panels of architects as suggested by the Ministry of Health. If there is a text-book upon the subject I should like to know its name, author, and publisher.

SEEKER.

Steel Windows.

Sir,—I have been told that it is almost impossible to make steel windows weather-proof at the jambs unless built in wooden frames. On the contrary, I see many houses where the windows are built straight into the brickwork. I should be glad to have the views of your readers as to the relative merits of the two methods.

TYRO.

THE BUILDING TRADE

ESSAYS ON BUILDING PRACTICE.—XVI

By J. R. TAYLOR.

THE HOUSING PROBLEM—II.

The principal defects revealed in connection with so many houses erected by or for local authorities are admitted damp and dry rot, though on some sites structural defects of a very serious character have been met with.

The particular form of dry rot that has already caused widespread damage is that known as *Merulius Lacrymans*, and, though in other forms it has also done much mischief, it is sufficient for present purposes to consider it in that which is most commonly met with. The precautions that give reasonable assurance against the spread of *Merulius Lacrymans* will generally be found to be sufficient guard against dry rot in other forms. In regard to dry rot (*Merulius Lacrymans* to be hereinafter understood), a client and friend sought information from a mycologist of the highest standing, and for my benefit my friend condensed the information received as follows:—Dry rot is a timber-destroying fungus, so abundant in an active or dormant state in this country that no ordinarily constructed building containing wood can be said to be immune when conditions favourable to its development are set up. It must have food, water, air, and some degree of warmth. Its food is wood, and is found in abundance in all domestic buildings. Practically all woods, hard or soft and of good, bad, or indifferent quality, will serve the purpose of food, but soft sapwood is most to its taste. The ordinary conditions in regard to warmth and air of habitable rooms will not stay growth, but stagnant air is more favourable to it. The moisture must be more or less constant, because though lack of moisture will not kill the spores, even though absent over a period of years, its presence is necessary to their development.

No matter where the timber is situated, it cannot under ordinary circumstances be said to be immune from attack, but the origin of the outbreak will be local and seated in moisture or admitted damp. The outbreak may originate in a roof (particularly where the presence of felt leaves a missing slate undetected for a long period); in any timber bedded in, on, or against an outer wall; in cupboards (particularly those containing hot-water tanks) and in many other places not usually regarded with suspicion. In at least nine cases out of ten, the outbreak occurs at or below ground-floor level, and what I am endeavouring to show is that it is just at this point that circumstances have conspired to make what for the sake of brevity I will call the "council house" peculiarly vulnerable.

In order properly to appreciate the position it is necessary to contrast the conditions governing the choice and development of housing sites to-day with those usually obtaining when the speculative builder provided nearly all the cottages and small houses erected before the War. Much greater difficulties confront us when the building is on town-planning lines than when on the haphazard kind of site. In the building of small houses the principal requirement from the point of view of the speculative builder was that it should be such as not to entail excessive cost in foundation work. Generally speaking, he was not in a position to sell at a price based solely on ascertained cost, but was compelled to build in such a way that the rent obtained for his houses would yield an adequate return on the money invested, and as the rent obtainable would in the main depend on the accommodation offered, under ordinary competitive conditions a difficult site was not capable of being economically developed. He did sometimes build on difficult sites, but only as a rule where accidental circumstances set up a local demand. It is not always understood how important it is that the site chosen for small houses to be rented should present, if possible, less rather than more difficulties than the average, because of the very small margin that can be spared for the substructure in relation to the total cost. If the cost of the substructure were unduly high when compared with the superstructure in ordinary circumstances the speculative builder would make a loss. Many of them did, and their houses were thrown on to the market at what they would fetch to meet as far as possible the claims of the creditors. But as a rule the builder built only on sites that offered a practical proposition from the economic point of view. On clay soils, until it was frowned upon, he built the semi-basement type of house. On sloping sites he built close up to the edge of the road. His one aim was to keep down costs. His problem was fairly simple, because when building his houses he only bought comparatively small parcels of land suitable to his requirements, whereas the town-planning method calls for extensive tracts.

Though this all tended to a confused development, a little study of any small town will reveal a certain amount of method in the apparent madness. For preference the residential quarter will stand on high or at least easily drained land. The shopping centres will be where the cost of excavating basements or cellars is lowest. The small houses that have not obviously been built to house the workers of some adjacent factory, sited on low-lying ground, will in the main be found where the land and the roads serving them impose no avoidable cost on the substructure.

From the building point of view the coming of the railways made an enormous difference to the land at each side of them, whether the track was carried on embankment or in cutting. Land that was formerly served by roads lying a little below general surface level, and was therefore easy to build on, found itself well below road level when the gradients were altered to conform to the many new bridges, or, alternatively, was made more difficult of approach when the roads were sunk to give headroom. But the advantages offered by the coming of the railways more than compensated an additional cost on building thus imposed, and they would not be mentioned here were it not that similar effects on a much wider scale are operating by reason of the new developments in connection with main roads.

Chesterton tells us that "the rolling English drunkard made the rolling English road," but the real reason for their roll is that in the old coaching days there was not thought to be any valid reason why they should not roll on the lines of least resistance. We did carry them on an embankment when crossing marshy ground, and we did form cuttings through very steep ground; but generally we were content to dig down to a foundation and pitch blind and roll it, with the result that most of the land at either side stood at something not much above or below the crown of the road. So much so was this the case that in some districts the question would be put as to the height of ground-floor level above crown of road when approval of plans was sought.

With the coming of fast-borne road traffic all this is being rapidly changed. The road-building engineer seeks to make his roads as straight as possible and to lay them to gradients favourable to the attainment of high speeds. He has still to consider the bridges over railways, rivers and streams, and as hogbacks at these points are extremely objectionable, the total effect is that in the case of new or improved roads the tendency is to lift them well above the level of the lands at each side. The roads being so very much closer together than the railways this makes a serious difference to building sites, and presents the town planner with a very difficult problem. In the Midlands and the South we thus have, in the first place, a huge area of comparatively flat land divided into very large compartments bounded by low hills and railway embankments, drained in some places by railway cuttings, but in the main by rivers. Under the new road-forming policy we are rapidly dividing these very large compartments into innumerable smaller compartments bounded by embanked main roads and drained by streams, brooks and ditches. When we set about a new housing scheme on a large scale and hand over to the town planner one, or part of one, of these smaller compartments to sub-divide, we do not at the same time always provide him with sufficient money properly to drain it. If he protests we remind him that after all he is only building cottages which must be built cheaply, little knowing that to build really good cottages cheaply is about the most difficult task to accomplish, and to build good cottages cheaply in these little compartments is next to impossible.

BUILDING TRADE UNEMPLOYMENT

The Minister of Health and the Minister of Labour received a deputation recently on behalf of the Prime Minister from the National Federation of Building Trades Operatives. The deputation was introduced by Mr. Thomas Barron.

Mr. Barron said the deputation were anxious to lay before the Government facts and figures showing the serious position of the building industry at the present time. The number of unemployed men in the industry was now well over 200,000, and the deputation were most anxious to hear from the Minister some account of the Government's housing programme and to know what could be done to stimulate housing and relieve unemployment in the industry. The deputation wished also to protest against the system of training adopted both by the Ministry of Labour and by Public Assistance Authorities, which meant that unemployment in the industry was increased by the competition of inadequately trained men.

Miss Bondfield, replying to the latter point, said the number of men entering the building industry through the Ministry of Labour training schemes was only a small proportion of the total number of entrants.

The Minister of Health, replying to the more general point, said programmes under the Housing Act of 1930 were now being received, and the figures which they revealed were encouraging. They showed that something like an average of 100,000 State-assisted houses a year were likely to be put in hand by local authorities over the next five years. These figures, regarded as a bare minimum, were by no means unsatisfactory, as, together with private enterprise building, they should give a total output of houses of about 200,000 a year. Admittedly, however, there were some authorities which ought to do more, and this was a matter to which he was now giving his attention. Although a larger number of houses was being built this year as compared with last year, unemployment in the building industry was much greater.

INSTITUTE OF BUILDERS: DINNER.

The annual dinner of the Institute of Builders was held on Tuesday night at the Carpenters' Hall, the President, Mr. R. A. Costain, occupying the chair. Supporting him were Lord Amulree, G.B.E. (Secretary for Air), and Lord Burnham, G.C.M.G., C.H. Among those present were: the Very Rev. Dean Inge, Mr. C. J. Ammon, Rt. Hon. Lord Clwyd, Sir Robert Tasker, Mr. Louis Jacob (Master, Carpenters' Company), Rev. A. J. Costain, Mr. S. P. Purkiss-Ginn, Messrs. H. T. Holloway, R. J. Holliday, W. E. Tyson, F. J. Gayer, F. Quentery Farmer, Ernest J. Brown, Ralph Pearson, W. H. Jones, R. L. Roberts, T. Howarth, Brian O'Rorke, B. C. Aldous, C. H. Simpson, G. Turville Brown, Stanley Hamp, A. B. Falkner, C. H. Long, Dr. R. E. Stradling, W. T. Plume, Prof. C. H. Reilly, Sir J. Sandeman Allen, R. Angell, J. H. Barns, C. J. Bennett, A. C. Blomfield, G. W. Buchanan, Eric Burt, E. Stone Collins, A. B. H. Colls, J. W. Comber, Arthur J. Davis, A. B. Falkner, G. Gee, L. F. Grace, H. A. Mackmin, H. Neal, A. Roome, W. B. Simpson, J. D. Stevenson, C. C. Trollope, F. A. Wallis, G. Widdowson, C. G. Hare, and P. J. Spencer, secretary.

The loyal toasts having been honoured,

Lord Burnham, proposing the toast of "The Institute of Builders," said that the Institute was founded by men anxious for the credit and development of their industry. Quite early, they refused to be drawn into trade disputes or into those individual differences which arose in the course of business unless the question was one of general principles affecting the welfare of the industry. Its activities were, therefore, from time to time concerned with legislation and with the conditions which made towards or away from equity in business. In 1868 the desirability of uniform conditions of tender and contract as a basis for sound building practice and building science led the Institute to approach the Royal Institute of British Architects, which resulted in the 1870 form of building contract, from which subsequent forms of contract agreed with the R.I.B.A. were historically descended. In legislation, the Institute had supported and opposed various measures in the House of Commons, uniformly taking as its view that the welfare of the Industry was contained in the public interest. Since the war, its attention had been almost exclusively devoted to the technical education interests of the future builder and builder's manager. This year an important piece of work had been established. National Certificates and Diplomas had been established. The response of the schools had been immediate, and, indeed, almost embarrassing, proving the demand of students and the real need for them to have some hall-mark certifying their industry and knowledge. There could not be good architecture without good building, and it was by upholding the highest standards of performance that the Institute could do much to refute the observation that the principal aim of the last 100 years had been the destruction of beauty.

Mr. R. A. Costain, the President, replying, said that they much appreciated the presence of Lord Burnham to honour the Institute. They much regretted the absence of Mr. E. H. Leeder (President of the Chartered Surveyors' Institution)—who had been taken ill and whom all would wish a speedy recovery—and Sir Edwin Lutyens, President of the Incorporated Association of Architects and Surveyors. They had sent much-welcomed substitutes, however, in Mr. G. Turville Brown and Sir Robert Tasker. As President, he was glad to acknowledge the presence of three gentlemen who had travelled from Liverpool to be present at their dinner—Lord Clwyd, Professor C. H. Reilly and Sir J. Sandeman Allen. He would also refer to Mr. R. L. Roberts—whose third son had that day appeared in the Moderation list at Oxford University with first-class honours. Turning to the affairs of the Institute, the year 1834, said the President, was remarkable in that it saw the foundation of the Royal Institute of British Architects and the consolidation of the then Society of Builders. Old as the latter society was, it could not compare with the old and honourable foundation of the Carpenters' Company, through whose Master, Mr. Louis Jacob, they were privileged to enjoy that night the amenities of the beautiful Carpenters' Hall.

It was in 1834, therefore, that architecture and building arrived at the point where the activities of each needed to be clearly defined. The two Institutes had not always seen eye to eye. During the last year, he was sorry to say, their differences had become acute, never more so than on this night when some epidemic seemed to have prevented any of the R.I.B.A.'s vice-presidents from taking the place, at the dinner, of their invited President—himself absent through the sincerely-regretted illness of his wife. The Institute of Builders regretted that they had found it incumbent upon them to guide the policy of the R.I.B.A. on the question of Registration. It was small wonder that there should be differences of opinion between builders and architects, because there had been differences in the R.I.B.A. itself. If the builders had considered their own personal advantage they would have been content to let sleeping dogs lie, but they considered the welfare of their industry as essential to the welfare of the country. He could assure the company that the Institute of Builders had no other motive in their action, apart from their feeling that they had not a right but a duty to be heard on a matter in which the public interest and the welfare of the industry was directly concerned. The Institute of Builders had consented to the request of the Parliamentary Committee considering the Bill that their Secretary should render his best services to the Committee, and had also suggested that the Institute itself should co-operate with the R.I.B.A. to aid in the benefiting of the industry, the public and the Institute. So far, no reply had been received from the R.I.B.A. He regretted, said the President, the raising of such controversial points at a friendly gathering, but he felt that silence would be open to misconstruction of the Institute of Builders' policy and intentions. Regarding the question of contracts, the R.I.B.A. had passed a form of contract of which the Institute of Builders knew nothing. In the 1909 form of contract, there was a clause providing for arbitration, but in the new draft there were two alternative modes set out for resort to arbitration, making for a certain quality of unevenness which undoubtedly should not be.

Lord Amulree, replying to the toast of the "Guests," submitted by Mr. S. P. Purkiss Ginn, reminded his audience that he was once connected with the Building Industry Council of Review appointed to investigate the condition of the industry with a view to reducing costs. It was stipulated that no architects' fees were to be reduced, that no builders' profits were to suffer and that no operatives' wages were to be decreased. Apart from that, the Council was to seek to reduce the cost of building! Well, they solved that problem by deciding that builders must have a time and progress schedule; next they came to the conclusion that building laws and regulations—especially the London Building Act—were ill suited to modern needs and requirements and should be revised. There should be, the Council resolved, more regular hours worked by the operatives and also there should be greater standardisation of materials. Lastly, there should be joint action by architects, surveyors, builders and operatives to get concerted action. There was no short road to prosperity in industry, but we could review it and find out where it was falling short. Under those circumstances, it was believed that the cost of building could be reduced by 25 per cent. On the subject of civil aviation, the Air Ministry was faced with the problem of providing landing accommodation at not more than 25-mile centres and at every large town. At present there were 8 towns with aerodromes and 18 other towns were negotiating for sites. Twelve more had reserved sites in their town-planning schemes besides 126 more which had taken preliminary steps. He would appeal to the Institute of Builders that in town-planning schemes with which their members were concerned sites for aerodromes should be reserved. The minimum area was 75 acres, but 150-200 was preferable.

The Very Rev. W. R. Inge and Mr. C. J. Ammon also responded.

INCORPORATED CLERKS OF WORKS' ASSOCIATION

Annual Dinner.

The 48th annual dinner of the Incorporated Clerks of Works' Association of Great Britain was held on Saturday, April 11, at the Holborn Restaurant, W.C., under the chairmanship of Mr. Chas. W. Long, F.R.I.B.A. After the customary loyal toast had been duly honoured,

Mr. W. J. Allison (V.P., I.C.W.A.), in proposing the toast of "The Architects and Surveyors," said the association fully appreciated the assistance given by the members of the two professions which formed the subject matter of the toast. The designing of buildings at the present time presented a far different proposition from what it did years ago, owing to the various new methods of construction and the materials used. But he thought the architect had now to contend with a far greater problem in the obsolete building laws whose restrictions and regulations hampered him at every turn. With regard to the surveyors, it was true to say that they were the right-hand men of the architects because they relieved the architects of measuring up, etc., and settling the important items that came within their province. They were delighted to see so many architects and surveyors gracing their board, and he hoped that the architects would remember the association when they required any efficient clerks of works.

Mr. T. P. Bennett, F.R.I.B.A., responding, said many clerks of works worked faithfully and well, but owning no allegiance to any body of people, when the time arrived when they could no longer give that high standard of work, they often had little to fall back on. He commended the cause of the association's benevolent fund to his fellow architects and to the surveyors. He desired to take that opportunity of tendering public appreciation of the services which architects received from the clerks of works. It was to those men that many architects owed the smooth running and success of many of their larger contracts. Architects must all be impressed with the extraordinary difficulty of really controlling the detail of contracts which were proceeding at top pressure, and executed with the greatest possible rapidity by large numbers of men.

Mr. A. Strachan Bennion, F.S.I., on behalf of the surveyors, said he desired to thank the members of the association for the excellent services they had rendered. Often surveyors were called in to settle the many difficulties that arose during the building contract, more especially as to measurement and prices, and at such times clerks of works were generally found to be the surveyor's best friend.

The chairman, proposing the toast of "The Association," said the object of the association, which was founded in 1882, was to form some protection, some endowment fund for the benefit of those who, in the course of time, got beyond their period of active service. At the moment the association was looking after eight old members, and that number, owing to their president's energy,

would be increased within a comparatively short time. He had come to the conclusion that it would be worth the association's while to consider the question whether it was not practicable to have such appointments as part-time clerks of works for those country jobs, where a client could not be recommended to have a whole-time clerk of works on the job.

Mr. G. W. Eyles (President, I.C.W.A.), responding, said one of the association's chief objects was to act as a link between its disengaged members and architects requiring the services of clerks of works. Their strict adherence to the rules was sufficient to convince architects and surveyors that when engaging a member of the association they could depend upon obtaining the services of a reliable man.

Mr. W. Lake (P.P., I.C.W.A.), proposing the toast of "The Worshipful Company of Carpenters," said the Carpenters' Company were their chief patrons, and had encouraged them from practically the inception of the association. They gave the association housing in one of the best addresses in London; they encouraged the building trade, and in their school at Titchfield-street they educated the young idea in the way it should go.

Mr. Louis Jacob, A.R.I.B.A., F.S.I. (Master of the Worshipful Company), returned thanks in a felicitous speech.

Mr. E. Schofield (P.P., I.C.W.A.), proposing the toast of "The Builders," said the clerk of works in his relationship with the builder was looked upon as a necessary evil, but that was a wrong impression from his point of view. Co-operation between the two in carrying out the respective drawings and specification of the architect pointed to unity of purpose, by which they got the finest building. The clerk of works was not on a job to find unnecessary faults, and if he did his duty to the architect and the builder, the owner got a first-class job.

Mr. F. W. Loasby responded.

The toast, "The Visitors," was proposed by Mr. W. J. T. Bale (secretary, I.C.W.A.), and Mr. F. W. Clark responded.

The toast of "The Chairman" was proposed by Mr. P. J. Luxton (P.P., I.C.W.A.), and the Chairman briefly replied.

NEW CINEMAS

Aberdeen.—Messrs. J. R. Poole, Edinburgh, and Mr. Wm. Firth, of Bradford, propose a 2,500-capacity cinema on a site in Justice Mill-lane and Holburn-street. The estimated cost is £30,000, and work is expected to commence in May. The cinema will be called the "Regent." The "Palace" cinema, owned by Messrs. Poole's, is being reconstructed to plans by Mr. C. T. Marshall, of Newcastle-on-Tyne.

Ashton-under-Lyne.—A contract for alterations to the Theatre Royal, Oldham-road, for conversions into a "talkie" (plans by Mr. H. A. Yearsley, Imperial Buildings, Oxford-road, Manchester), has gone to Messrs. A. Pellowe & Sons, Oldham.

Dewsbury.—A contract for the new "Playhouse" cinema in Crackenedge-lane, for Playhouse (Dewsbury), Ltd., has gone to Messrs. J. Wimpenny & Co., of Linthwaite, Huddersfield. The architect is Mr. Robert Cromie, F.R.I.B.A., 35, Baker-street, W.1.

Glasgow.—Plans have been passed by Dean of Guild Court for the "Florida" cinema, to hold 1,700, at Ardmay-crescent, King's Park. The architect is Mr. Hamilton Neil, F.R.I.B.A., 163, St. Vincent-street, Glasgow.

Lowestoft.—A contract for the rebuilding of the "Palace" cinema has gone to Messrs. J. Youngs & Son, Ltd., Norwich. Plans are by Messrs. Morgan & Buckingham, A.R.I.B.A., 1, Upper King-street, Norwich.

Portsmouth.—A contract for the reconstruction of "Prince's" Theatre, Portsmouth, for New Prince's Cinema, Ltd. (Mr. W. J. Wakeley, L.R.I.B.A., architect, Portsmouth), has been awarded to Messrs. Roy Corke, Ltd., Southsea.

THE BUILDING RESEARCH STATION

QUESTIONS AND ANSWERS.

THE following abstracts of enquiries from the information bureau of the Building Research Station* represent a number of those recently submitted to the Station. The information given in the replies quoted, we are informed, is based on available knowledge. It has to be borne in mind that further scientific investigations may, in the course of time, indicate directions in which the replies might be supplemented or modified. Moreover, the replies relate to the specific subject of each enquiry, and are not necessarily suitable for general application to all similar problems.

Corrosion of Copper.

A local authority forwarded copper balusters which showed signs of corrosion at the sweated joints. The balusters were hollow and had been filled with sand. Information was required as to the cause of corrosion, methods of overcoming the difficulty, and whether filling with plaster of Paris would be more advantageous than sand.

REPLY:—The factors leading to failure are probably as follows:—Zinc chloride ("killed spirits") has apparently been used as a flux in sweating the joints. The sand, with which the baluster was filled, was wet. Presumably, therefore, the joints were not all perfectly watertight. The moisture which was thus able to enter, in conjunction with the chloride, set up corrosion of the metal in the joint, with consequent increase of the leakage and aggravation of the trouble. The rounded form of the sand grains, the presence of calcium carbonate and traces of chlorides and sulphates, suggest that the sand used in filling the balusters is a washed sea sand. It is not possible, however, to state this with certainty.

As precautions against such trouble in the future we would recommend:—

(1) That a mixture of resin and methylated spirits be used as a flux in sweating the joints; (2) that particular care be taken to ensure that the joints are watertight; and, (3) that the sand used for filling should be above suspicion. We wish to lay special emphasis upon recommendations (1) and (2).

There are certain disadvantages in the use of plaster of Paris as a filling material in metal balusters, and we should hesitate to recommend it for this purpose. The material undergoes an expansion on setting, and it is possible that this would produce stresses in the balusters which would be sufficiently large to cause some of the joints to become defective. The comparatively large amount of water introduced with the plaster would tend to bring soluble salts present in the plaster into contact with the metal. Where joints are not perfectly watertight evaporation and crystallisation would take place, with the possible recurrence of the corrosion trouble

Lime Mortar Failing to Harden.

An architect stated that, whilst lime mortar gauged 1 : 10 with white cement used for brickwork was quite satisfactory inside the building, in nearly all the boundary walls no setting had taken place during the six months they had been erected.

REPLY:—Lime mortar consisting of ungauged non-hydraulic lime and sand has no chemical set such as is obtained with cement; the hardening is entirely due to drying out and carbonation. Experiments carried out at the Building Research Station on the tensile strength of lime mortars, gauged with different quantities of Portland cement made up with ordinary washed builder's sand in the proportions, by volume, of 3 of sand to 1 of grey hydrated lime, indicated that an addition of 20 per cent. (by volume of the lime) of Portland cement was needed to produce any significant strength in the mortar.

The gauging of lime mortar with 10 per cent. of cement would probably be sufficient to impart slight setting properties to the material, but it would not produce a mix having any appreciable strength, and would not render it immune from frost action. Frost is probably the cause which has prevented the hardening of the mortar outside the building, while inside material appeared to be satisfactory. The different drying conditions would be an added reason for the difference of behaviour between the two situations.

Corrosion of Metal Lathing by Clinker Plaster.

A manufacturer forwarded for inspection two samples of corroded expanded metal lathing covered with plaster, and stated that extensive corrosion had occurred in about six or eight weeks after erection. Users of the lathing are usually advised to cover it with cement and sand mortar, or alternatively with a well-run lime putty plaster, and it is pointed out that metal lathing should never be encased directly in patent plasters in common use. There is no objection to using patent plaster purely as a finishing coat, provided that the pricking up and floating coat are well laid on and are dense. The metal laths were used in dwelling-rooms, and were stapled to wood joists approximately 16 in. apart. There was no risk of abnormal dampness or excessive air circulation to cause unusual oxidation.

Reply:—Superficial examination suggested that the plaster had been mill-run, and that clinker or ash had been used as aggregate. A brief chemical examination of the samples submitted was made, in order to discover the nature of the cementing material. Owing to the lack of marks of identification and the broken character of the material, the samples were not examined separately.

The presence of a good deal of lime was demonstrated. The clinker or ash contained a proportion of coal, and, as would be expected, a proportion of sulphide sulphur. It therefore appears that the plaster has been made from a mixture of lime and clinker or ashes. The presence of other added plaster, such as gypsum plaster or patent plaster, cannot be excluded by the tests reported. Complete chemical analysis might show the presence of such plaster if it were present in large quantities, but would not be informative otherwise. We do not think a complete chemical analysis would throw any additional light on this problem.

Plaster made with ash or clinker containing unburnt or only partially burnt coal would be expected to be corrosive, the corrosion resulting from the presence of sulphur compounds. When the alkalinity of the mix has been reduced by carbonation of the lime, corrosion will be induced, and will be especially severe in cases such as the present, where the aggregate is finely ground. Even under apparently dry conditions, corrosion will occur if, as is commonly found, the aggregate has the power of absorbing moisture from the atmosphere.

For further information on the behaviour of mortars, such as the one in question, querist is referred to the Building Research Station publication, "The Corrosion of Steel by Breeze and Clinker Concretes." (H.M. Stationery Office, price 6d.)

[Further notes from the Building Research Station will be given next week.]

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MANCHESTER BUILDING EXHIBITION

The twelfth Building Trades Exhibition opened on Tuesday at the City Hall. The exhibition is technical in its aim, and many of the stands are occupied by modern machinery needed for building on a large scale, and for road contractors' work. There is also the other side of technical advance which shows itself in design and in the production of articles intended for the use of modern architectural fashion. A survey of the stands confirms the importance of plywood in modern building; it is coupled with a variety of sound-proof boards, sound-absorbing quilts, and insulating boards of every kind, each one offering to fulfil material needs whose satisfaction has not always been within easy reach. Another group of exhibits which reflects modern practice is that which shows varieties of artificial stone or reconstructed stone which can be dressed to take sculpture in the way of stone, coloured and weathered artificially to acquire the background of their surroundings. The exhibition contains attractive displays of bricks, mostly rough-faced, and tiles. There is a complete house in the Tonman Hall built to a contract price of about £1,500. We append notes on some of the major exhibits :—

As announced in *The Builder*, the exhibition authorities, in conjunction with the Manchester Society of Architects, have organised an interesting competition, open to architects and students in all parts of the country. The competition has taken the form of a design for a garage on an imaginary site in the centre of the city, and the designs submitted by competitors are on view on Stands 90 and 91, in the Tonman Hall. The following awards were offered by the exhibition organisers :—First prize £100, second prize £30, and third prize £20.

Aerograph Co., Ltd., Stand 46.—A full range of Aerograph and also De Vilbiss spray-painting and finishing equipment is shown, including a working plant with which practical demonstrations are given. With the spray-painting and finishing system one operator can do as much work as five or six men with the brush, and also produce a superior finish, free from unsightly "brush marks" and other blemishes. The company are also specialists in the design and installation of complete finishing plants.

On *The Builder* Stand, No. 87, Tonman Hall, current issues of the newspaper will be found, besides copies of *Architecture*. Special numbers of the latter yet available include :—"Swimming Baths," "Town Halls," "Flats," "Ice Rinks," "Factories," "Cinemas," etc., etc. Amongst the wide selection of books on sale are :—"Old London Illustrated," "Estimating for Builders," "Everyday Science for Architects and Builders," "Designs for Houses," "Bungalows of To-day," etc.

Eclipse Rail-Track Ladder Co., Stand 50.—Extending ladders are the main feature of this stand, but paperhangers' folding tables, extending scaffold boards, adjustable ladder brackets, trestles and steps of all kinds may be seen. Various new appliances, such as extra high lattice steps, a strong household step, pompier ladders, the safety trestle ladder, and lastly, a handy two-step seat, are also shown.

Educational Supply Association, Ltd., Stand 47.—This exhibit includes (a) Esavian Maxlite folding and sliding window; (b) Esavian folding and sliding window for use in hospitals and open-air schools, fitted with hoppers below and pivoted fanlights above the folding portion; (c) Esavian folding and sliding garage doors, 12 ft. by 12 ft., in teak, made in four leaves, fitted with glazed lights; and (d) Esavian folding and sliding doors for hospitals, flush panelled, glazed with rounded corners, and fitted with chromium fittings.

Elsan Manufacturing Co., Stand 73.—Here are shown the "Elsan" chemical indoor closets, which provide efficient, safe and hygienic sanitation where main drainage is not available. They are specially adapted for homes, cottages, sports grounds, works, factories, parks and all buildings not connected to public sewers. There is a wide range of models, both portable and permanent self-emptying types, to suit all purposes. The "Elsanol" chemical steriliser is also shown.

Messrs. Goodwin, Barsby and Co., Ltd., on Stand 81, Tonman Hall, exhibit machines of interest to the small builder and contractor and also to organisations engaged on public works, as stonebreakers, concrete mixers (especially the 5/3½ model, mounted on a transport carriage), portable screens and loaders, etc. Full details are also available of Goodwin tar and macadam plant. A useful exhibit.

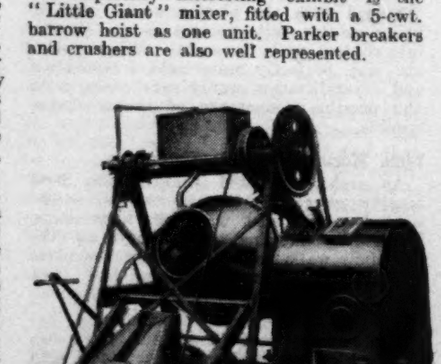
Insulite Products Corporation, Ltd., Stand 59.—This exhibit draws attention to the fact that in addition to its use for ordinary wallboard purposes, "Insulite" is also made specially for sound deadening, roof insulation, plaster base, carpet lining, and, in an attractive style called "Acoustile," consisting of blocks with bevelled edges, for the acoustic correction of cinemas, halls, etc.

A large selection of concrete mixing and moulding machinery is shown on the Liner Concrete Machinery Company's Stands 5, 21 and 22. Plant shown includes the "Liner-Junior" tilting-drum concrete mixer of 3½ cu. ft. capacity. This will mix and discharge at either side, and is direct driven. Other examples are shown of tilting-drum plant with or without hoppers up to a capacity of 7 cu. ft. Combination slab, block and brick machines, face-down block machines and a stone moulding machine, with a variety of other concrete plant, are also displayed.

Millars' Machinery Co., Ltd., Stands 38 and 39.—Machinery working as far as possible under realistic conditions is here shown. Diaphragm pumps are seen pumping water from a trench. The 6/4-L concrete mixer with the latest automatic cut-out, jigger shaker device embodying many new and original principles in concrete mixer design, is seen in operation. Hoists and many other features of special interest to the contractor are displayed.

R. H. Neal & Co., Ltd., Stand 29.—This stand is entirely devoted to the "Rapid" 4 in 1 cranes, and three mountings of the 6-cwt. size crane are shown, illustrating the adaptation of the crane for various classes of work by means of using it as an ordinary jib crane or with the first or second extension masts. In addition, shown for the first time, is a new model of this crane of 12-cwt capacity, which has only just recently been put on the market.

Frederick Parker, Ltd., Stand 53.—Here is shown an interesting range of mixers. Many important improvements in design will be observed, and two new models are shown, the "D" type and the new Parker multiple batch mixer, both worthy of special note. One especially interesting exhibit is the "Little Giant" mixer, fitted with a 5-cwt. barrow hoist as one unit. Parker breakers and crushers are also well represented.



A "Parker" D-type Concrete Mixer.

The Patent Impermeable Millboard Co., Ltd., on Stand 45, show their "Sundeala" and "Insulwood" building boards. The former is a waterproofed wall and ceiling board of sterling qualities, and is shown in several decorated effects. "Insulwood" is principally an insulating board, which may be decorated or used, if desired, as a plaster base. In these days, when the problems of acoustics and noise-prevention are acute, these products are worth close inspection.

E. Pollard & Co., Ltd., Stand 48.—A special feature of this stand is the Haskins' patent portcullis shutter. The shutter curtain consists of channels, either of steel, bronze or any other material, fitted horizontally and connected with cast-steel links. These links are fixed at the top and loose at the bottom, and move vertically in continuous slots formed in the bottom of the channels throughout their length, the links automatically lifting the channels during the upward movement of the curtain, so that the channels are closed together at the head of the opening. The shutter can be operated from any adjacent or remote position by winding gear or by electric power.

Ruberoid Co., Ltd., on Stand 114, New Hall, are showing roofings and roofing felts, slates, etc., in a useful range. "Ruberoid" is a bitumen roofing, for use on large commercial and industrial buildings. It is unaffected by fumes of acid or alkalis or by sea air, and is equally suitable for flat or pitched roofs. "Pluvex" roof felt, strip slates in green or red colours, "Ruberoid" damp-courses, etc., complete the exhibit.

J. Sagar & Co., Ltd., Stands 51 and 52.—Here is shown a varied display of wood-working machinery, all electrically driven, including the "Premier" combined hand and roller feed surface planing, thicknessing, moulding, etc., machine; the roller feed panel, planing and thicknessing machine; a tenoning machine; a semi-automatic chain cutter and hollow chisel mortising and boring machine; a semi-automatic chain cutter and hollow chisel mortising machine; a band sawing machine; a heavy vertical spindle moulding and shaping machine; and a tenoning attachment.

Scaffolding (Great Britain), Ltd., Stand 54.—On this stand are exhibited the most modern types of safety scaffolding and scaffolding devices, comprising patent tubular scaffolding. Special attention is directed to the new Scaf-lock jointing pin, a feature which has shown a considerable saving in erection and dismantling costs; heavy suspended scaffolding, a safe, continuous scaffolding for use on steel-frame buildings; and various other patent appliances manufactured by the company which are on view.

The whole of the exterior of the Venesta, Ltd. Stand (No. 56) is constructed in Venesta birch, toned to a suitable shade to go with the copper "Plymax" lettering. This, it will be remembered, was the winning stand in a recent competition, won by Mr. Wells Coates. The screen or division between this stand and the next shows the standardised named grades of Venesta birch, which are all made under the same conditions and sorted only according to the number of knots and similar timber defects. The division is one foot thick, and let into it are four roundabouts showing various Venesta products, including Empire timbers, and also panels of decorative "Plymax." The tables in the various rooms are made with copper "Plymax," and the floor of the stand is made of Venesta birch plywood.

Winget, Ltd., Stand 16.—A comprehensive range of this firm's products is here shown, including the following :—Open drum mixers, including a new all-tubular steel frame model without elevating hopper, and another machine fitted with elevating hopper and automatic tilting water tank. These mixers are fitted with the semi-helix drum, guaranteeing perfectly mixed concrete. Other exhibits are diaphragm pumps, tip carts and barrows, kerb moulds and block and slab-making machines.

*** Concluding notices will appear in our next issue.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st FEBRUARY, 1931.

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.]

	Masons.	Bricklayers.	Carpenters Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Aberdare	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Accrington	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Aldershot	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Alfreton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Alnwick	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Altrincham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Ashford (Kent)	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Ashington	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Ashton-under-Lyne	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Aylsham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Banbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Barnsley	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Barnstaple	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Barrow-in-Furness	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Barry	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Basingstoke	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Bath	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bedford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Berwick	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bexhill	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Birkenhead	1/8½	1/8½	1/8½	1/9½	1/8½	1/8½	1/8½	1/3½
Birmingham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bishop Auckland	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Blackburn	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Blackpool	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bognor Regis	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Bolton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bournemouth	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bradford	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bradford-on-Avon	1/3	1/3	1/3	1/3	1/3	1/3	1/2	11½
Braintree	1/4½	1/4½	1/4½	1/4½	1/4½	1,4½	1,4½	1/0
Brentwood	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1,1½
Bridgwater	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Bridlington	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Brighton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bristol	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bromsgrove	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bromyard	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Bungay	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Burnley	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Burton-on-Trent	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bury	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bury St. Edmunds	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Buxton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cambridge	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Canterbury	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Cardiff	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Carlisle	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Chatham	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Chelmsford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Cheltenham	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Chester	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Chesterfield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Chorley	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Cirencester	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Clacton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Colchester	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Coventry	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Cranbrook	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Crewe	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Cromer	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Darlington	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Deal	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Denbigh	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Derby	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Devizes	1/3	1/3	1/3	1/3	1/3	1 3	1/2	11½
Dewsbury	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Doncaster	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Dorchester	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Dorking	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Dovercourt	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Driffield	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Droitwich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Dudley	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Durham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Eastbourne	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
E.Glam.(Mon.Val.)	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Ely	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Exeter	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/4½	1/1½
Exmouth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Fakenham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Felixstowe	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Folkestone	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Frome	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Glossop	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Gloucester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/4½	1/1½
Godalming	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Goole	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Gosport	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Grantham	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Gt. Yarmouth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Grimsby	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Guildford	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Halifax	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Harpenden	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Harrogate	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Hartlepools	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Harwich	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hastings	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Hatfield	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hednesford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Hereford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Herne Bay	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Hertford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hitchin	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hoddesdon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Holt	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Huddersfield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Hull	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Hunstanton	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Huntingdon	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Isle of Wight	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Ipswich	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Keighley	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Kettering	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1,1½
Kidderminster	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1,5½	1,1½
Kings Lynn	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Lancaster	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2

	Masons.	Bricklayers.	Carpenters Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Leamington Sp	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Leeds	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Leicester	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Leighton Buzzard	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Lichfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Lincoln	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Littlehampton	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Liverpool	1/8½	1/8½	1/9½	1/8½	1/8½	1/8½	1/8½	1/3½
Llandudno	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Llanelly	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
London—								
12 m. radius	1/8	1/8	1/8	1/8*	1/8	1/8	1/7	1/3
12-15 m. radius	1/7½	1/7½	1/7½	1/7½*	1/7½	1/7½	1/6½	1/2½
Loughborough	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Lowestoft	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Luton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Macclesfield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Maidstone	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Malvern	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Manchester	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Mansfield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Margate	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Market Harborough	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Matlock	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Melton Constable	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Melton Mowbray	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Merthyr Tydfil	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Middlesbrough	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Newark	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Newbury	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Newcastle-on-Tyne	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Newcastle-u-Lyme	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
New Forest	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Newmarket	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Newport, Mon.	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Northampton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Norwich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Nottingham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Nuneaton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Oakham	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Oldham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Oxford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Paignton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Peterborough	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Plymouth	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Pontypridd	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Portsmouth	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Preston	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Ramsgate	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Reading	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Redcar	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Redditch	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1,5½	1,1½
Reigate	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Retford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Ripon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Rochdale	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Rochester	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Rugby	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Saffron Walden	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
St. Albans	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
St. Helens	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Sawbridgeworth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Saxmundham	1/2½	1/2½	1/2½	1/2½	1/2½	1/4½	1/2½	11
Scarborough	1/6	1/6	1/6	1/6	1/6	1 6	1/6	1/1½
Sevenoaks	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Sheffield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Shrewsbury	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Sittingbourne	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Southampton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Southend-on-Sea	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Southport	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
South Shields	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stevenage	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Stockport	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stockton-on-Tees	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stoke-on-Trent	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stourbridge	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stourport	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Stowmarket	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Stratford-on-Avon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Stroud	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Sunderland	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Swaffham	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Swansea	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Swindon	1/5	1/5	1/5	1/5	1/5	1/5	1/4	1/0½
Tamworth	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Taunton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Thetford	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Torquay	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Totnes	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4	1/0½
Trowbridge	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Tunbridge Wells	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Uttoxeter	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wakefield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Walsall	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Walsden	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Warminster	1/3	1/3	1/3	1/3	1/3	1/3	1/2	11½
Warrington*	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Warwick	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Wells (Norfolk)	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Welwyn Gar. City	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
West Bromwich	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Weston-sup-Mare	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Weymouth	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Whitby	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Wigan	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Winchester	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Windsor	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Wisbech	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Wolverhampton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Woodbridge	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Worcester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Worksop	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Worthing	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Wrexham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Wycombe	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Wymondham	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
York	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2

*The rate recognised by the National Association of Plasterers, Granolithic and Cement Workers, as and from the 1st February, 1931, is 1/10½ per hour.

For Building Trade wages in Scotland, see page 737.

NEW BUILDINGS IN LONDON

Barking.—Factory.—Messrs. A. Ibbetson & Son are building a factory in River-road.

Barking.—Hall.—Plans have been presented to the U.D.C. for the erection of a church hall in Longridge-road, for the Bishop of Chelmsford.

Borough.—Improvements.—Are to be made to the Borough Market, for the Borough Market Trust. The work is to cost £50,000.

Buckingham Palace-road. — Garage. — Messrs. Dorman, Long & Co., Ltd., of Middlesbrough, have received the contract for the supply and erection of the structural steelwork for the new Victoria Coach Station, Buckingham Palace-road, which is being built for London Coastal Coaches, Ltd. The architects are Messrs. Wallis, Gilbert & Partners, and the engineer is Dr. Oscar Faber, O.B.E.

Camberwell.—Housing.—The L.C.C. has scheduled a further area adjoining the Dog Kennel Hill site, between the Glebe and Grove Hill-road, for housing purposes.

Coulsdon.—Building.—County of London Electric Supply Co., Ltd., are erecting an electric transforming sub-station in Mitchley-avenue, Sanderstead.

Covent-garden. — Rebuilding.—The premises at the corner of Russell-street and Bow-street, W.C.2, are to be rebuilt. The demolition work is now in progress, and the builders are Messrs. W. H. Gaze and Sons, of High-street, Kingston-on-Thames.

Ealing.—Additions.—For alterations and additions to 69-79, The Broadway, for Messrs. J. Sanders, Ltd., Messrs. Hall-Jones and Dewhirst, of Parliament-mansions, Victoria-street, S.W.1, have prepared plans.

Ealing.—Alterations.—The London Co-operative Society, Ltd., Whitta-road, E.12, are having alterations made to their milk depot at Olive-road.

Ealing.—Shops.—Messrs. Hillier, Parker, May and Rowden, of Maddox-street, W.1, are having shops erected in the Uxbridge-road, Ealing, W.5, opposite the Town Hall.

East Ham.—Building.—The C.B. are to spend £2,500 on new accommodation for housing the main switchgear at the electricity station.

East Ham.—Hall.—A new church hall and alterations to the existing hall of All Saints' Church, Romford-road, are to be carried out to the plans of Mr. E. Meredith, F.R.I.B.A., of 7, Goodmayes-road, Goodmayes. No building contract has yet been settled.

Edgware.—Hall.—The Edgware Parochial Church Council are to have a church hall off Station-road, Edgware.

Islington. — Building. — Messrs. W. H. Wagstaffe and Sons, 9, Bartlett's-buildings, Holborn, E.C.4, have been accepted by the Islington B.C. for the erection of an electricity sub-station at 3 and 4, Flowers-mews.

Kingsbury.—Hospital.—For the erection of a maternity hospital, the Willesden U.D.C. are now inviting tenders.

Leyton. — Additions. — Messrs. A. E. Symes, Ltd., of Stratford, E., are building additions to Tom Hood central school, Cobbold-road, for the E.C. Messrs. J. T. Newman & Jacques, 61, West Ham-lane, E.15, are the architects.

Strand. — Improvements. — Mr. J. A. Phillips, of Pall Mall, has acquired a block of property running from George-court eastwards for a length of nearly 70 ft. The premises on the main frontage are numbered 51 to 55.

Surbiton.—Exchange.—H.M.O.W. Architect's Department are inviting tenders for the erection of a telephone exchange at Surbiton.

Thornton Heath.—Extension.—Extensions are to be made to stores and disinfector building at the hospital, Mayday-road, Thornton Heath, for the C.B. Tenders are being invited by the architect, Mr. H. Berney, 33-35, High-street, Croydon.

Woolwich.—Reservoir.—A large service reservoir of reinforced concrete is to be built at Plumstead Common for the M.W.B

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender, that a fair wages clause shall be observed, that no allowance will be made for tenders and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, &c., may be obtained.

Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor D.S.; Clerk, C.; Town Clerk T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

APRIL 20.

Aylesham.—Cottages.—Itteringham, 1 pair; Lamas, 2 pairs, for R.D.C. E. D. Browne, clerk.

Blackpool.—Library.—Branch library in Firgrove, for Corporation. F. Wood, B.E. and S. Dep. £2.

Breage.—Bungalow.—At Breage. W. Lukey, Trevena Cross, Breage, Helston.

Chadderton.—Houses.—60 non-parlour type, for U.D.C. S. Dep. £1 1s.

Chippenham.—Houses.—26 in Potley-lane, and six in hamlet of Gastard, Corsham, for R.D.C. Parker, Pearson & Ross Hooper, architects and engineers, Dallas-chambs. Dep. £5 5s.

Conway.—Bathrooms.—New bathrooms and new coal store at Isolation Hospital, Coresynyd, for Conway and Penmaenmawr Joint Hospital Board. D. E. Parry, clerk, Muriau-bldgs., Conway.

Dewsbury.—Buildings.—Minor alterations, painting and decorating, and electrical wiring at municipal buildings, Halifax-rd., for C.B. B.S.

Dumbarton.—School.—New primary school at St. Mary's R.C., Alexandria, for C.C. Joseph Weekes, County Architect, 18, Park-Circus, Glasgow, C.3.

Ealing.—Cottage.—Caretaker's cottage at Northolt school, for T.C. W. R. Hicks, B.E.

East Dereham.—Houses.—Six, at Cemetery-rd., for U.D.C. C. H. Reeder, clerk. Dep. £1.

Glasgow.—Works.—Joiner, glazier, slater and plumber works required at Glasgow slaughter houses, Melbourne-st., E.1, for T.C. D. Stenhouse, T.C.

Hull.—Wall.—Concrete retaining wall at Queen's dock basin, for T.C. H. Hamer, City Engineer.

Lee-on-the-Solent. — Telephone Exchange. — For H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

Liverpool.—Extension. — Of Sheil-rd. Council School, for E.C. Briggs and Thornely, architects, Royal Liver Buildings, Pierhead, Liverpool. Dep. £2 2s.

Liverpool.—Repairs.—Also external painting, of new w.c.'s at 24, 26, 28, 30, 32, and 34, Woolton-st., Woolton, for Corporation. Land Steward and Surveyor.

Nottingham.—House.—In Edward's-lane, for T.C. Wallis Gordon, City E. and S. Dep. £2.

Paignton.—Houses.—Six parlour type and six non-parlour type, for U.D.C. S., 23, Totnes-rd., Paignton.

Rochdale.—Glazing.—7,000 sq. ft. of patent roof glazing, for Gas Dept. Engineer and Manager, Gas Dept., Dane-st.

St. Helens.—Houses.—394 on Eccleston estate, for C.B. A. P. Statham, Borough and Water Engineer. Dep. £2.

Southampton.—Additions.—Also alterations, to Clock House, 390, Shirley-rd., in converting same into police station, for C.B. B.E., 33-35, French-st. Dep. £2 2s.

Twickenham.—Showrooms and Offices.—For the London and Home Counties Joint Electricity Authority. Leslie Gordon, 5, Millbank, Westminster. S.W.1. Dep. £2 2s.

York.—Houses.—Erection of, on the Heworth Grange Estate. City Engineer, Guildhall. Dep. £2 2s.

APRIL 21.

Barking.—Houses.—Pump house and jetty in connection with extensions to power station at Barking, for County of London Electric Supply Co., Ltd. Sir Alexander Gibb & Partners, Queen Anne's Lodge, Westminster, S.W.1. Dep. £5 5s.

Belfast.—Additions.—Alterations and additions to premises at Strandtown, Belfast, for use as an R.U.C. barrack, for Government of Northern Ireland. Secretary, Ministry of Finance, 15, Donegall-sq. West, Belfast.

Dewsbury.—Houses.—44 at Ravenshouse-rd. and 56 at Brewery-lane, Thornhill Lees, for C.B. Borough Architect and Surveyor. Dep. £1 1s.

Dublin.—Rebuilding.—A section of boundary wall at burial ground, Finglas, for Board of Public Health. Francis P. Russell, E., 16, Westmoreland-st., Dublin.

Dublin.—Heating.—Of nurses' home, 1, James's-st., for B.G. J. E. Condon, clerk, 1, James's-st.

Egypt.—Installation.—Electric lighting installation for Municipalities and Local Commissions Section of the Ministry of Interior. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. A.X. 10804).

Horsforth, Leeds. — Telephone Exchange.—For H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

Hull.—Installation.—Of low pressure hot water heating apparatus and low pressure steam heating apparatus at certain schools, for T.C. R. C. Moore, Director of Education.

Kidderminster.—Alterations.—Also additions to Bennett-st. school, for E.C. Pritchard, Godwin & Clist, F. & A.R.I.B.A., chartered architects and surveyors, Bank-bldgs. Dep. £2 2s.

Marshfield.—Walls.—Buildings, loose stone walls, making of paths, etc., for new burial ground at Marshfield. G. R. Morison, Clerk to Parish Council, Marshfield, Chippenham.

Peterborough. — Houses. — 50, on Fulbridge-rd. estate, adjoining St. Paul's-rd., for T.C. W. H. A. Court, City E. and S. Dep. £2 2s.

Peterborough.—Houses.—38 on Park-lane estate, West Side, for T.C. W. H. A. Court, City E. and S. Dep. £2 2s.

APRIL 22.

Barnsley.—Rebuilding.—Of "Neptune Hotel," New-st., for Clarkson's Old Brewery (Barnsley), Ltd. Dyson, Cawthorne & Coles, architects and surveyors, 10, Regent-st.

Birmingham.—Cottage.—At Moor End-lane, near Holly-lane, Erdington, for T.C. H. H. Humphries, City E. and S. Dep. £2.

Bolton.—Houses.—Eight shops in two blocks and six houses in three blocks, Hall-i'-th'-Wood, for C.B. Housing Director, Westminster Bank-chams., Old Hall-st. North. Dep. £2 2s.

Glasgow.—Painting.—At Hillhead (new) high school, Hillhead, for C.C. D. Stenhouse, T.C. Dep. £1 1s.

Hendon, N.W.—Garage, Outbuildings, etc.—At the Telephone Exchange, for H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

Hoddesdon.—Houses.—Demolition of property and erection of 6 houses at Lord-st., for U.D.C. W. Plumpton, S. Dep. £1 1s.

Killester.—Floors.—External and internal painting and decorations, also laying wood block and tile floors, concrete paths, etc., to approximately 247 houses at Killester, County Dublin, for Irish Sailors' and Soldiers' Land Trust. Secretary, 50/51, Upper Mount-st., Dublin. Dep. £1 1s.

Liskeard.—Houses.—For R.D.C. Higman & Taylor, architects, Barras-st.

Liverpool.—Railings.—2,500 lin. yds. wrought-iron railings and 5 pairs of gates, 512 lin. yds. galvanised corrugated iron railings and 3 pairs of gates, for T.C. City E.

Llangunllo.—School.—New school buildings at Bryn, for Cardiganshire E.C. R. Jones, County Architect, Llandyssul. Dep. £5.

Minehead. — Telephone Exchange. — For H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

Rochdale.—Houses.—260 on Belfield Hall estate, and construction of roads and sewers in connection therewith, for C.B. S. H. Morgan, B.S.

St. Albans.—Houses.—Stimpson, Lock & Vince, 173a, High-st., Watford. Dep. £1 1s.

***Sealand.**—Pumping Station, etc.—For the Chester Corporation. Charles Greenwood, A.M.Inst.C.E., Municipal Offices, Northgate-st., Chester. Dep. £2 2s.

Smethwick.—Extensions.—House, engine sheds, cart sheds, motor garages, repair shop, etc., at Rolfe-st. depot, for C.B. Roland Fletcher, B.E. and S. Dep. £5 5s.

Tiverton.—Conversion.—Of garage at The Works into public conveniences, for T.C. Capt. W. H Duncan Arthur, S.

APRIL 23.

Birkenhead.—Shed.—Shed extension and a dock wall at Morpeth Dock, for G.W.R. Engineer, Paddington Station, W.2. Dep. £2 2s.

Birmingham.—Extension.—Goods shed at Tyseley, near Birmingham, for G.W.R. Engineer, Paddington Station, W.2. Dep. £2 2s.

Caxton and Arrington.—Houses.—2 houses at Bourn, 3 houses at Eltisley, and 6 houses at Toft, for R.D.C. S. G. Wilkinson, clerk, Board Room, Caxton, Cambridge.

Glasgow.—Painting.—Of 90 houses at Carntyne extension scheme, for T.C. D. Stenhouse, T.C.

Heston and Isleworth.—Houses.—222 non-parlour type on Sutton-lane estate, Hounslow, for U.D.C. J. G. Carey, S. Dep. £2 2s.

London.—Heating.—Accelerated low-pressure hot water heating at "Mayfair" telephone exchange, Farm-st., W., for H.M.O.W. Contracts Branch, H.M. Office of Works, King Charles-st., London, S.W.1. Dep. £1 1s.

***Welling.**—Adaptation.—Of Bexley Welling Central School, Welling, for Kent E.C. E. Salter Daines, Director of Education. Dep. £2 2s.

APRIL 24.

Belfast.—Heating.—Installation of low pressure gravity hot water heating system in new P.E. school, Conlig-st., for E.C. R. Meyer, T.C. Dep. £1 1s.

Douglas, I.O.M. — Telephone Exchange. — For H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

Ealing. — Cottages. — Town Clerk, Town Hall, W.5. Dep. £1 1s.

Edinburgh.—Additions.—To City Chambers, north-west wing at Cockburn-st., for T.C. E. J. MacRae, A.R.I.B.A., City Architect.

Edinburgh.—Heating.—Low pressure hot water heating installation and electrical installation for higher grade blocks B1 and B2 at Gogarburn, for T.C. Stewart Kaye, A.R.I.B.A., 14, Hill-st.

***Hounslow.**—Houses.—Erection of, for the Heston and Isleworth U.D.C. The Clerk, Council House, Hounslow. Dep. £2 2s.

Kingston-upon-Hull.—School.—Proposed elementary school (first portion); Endyke-lane, for T.C. D. Harvey, A.R.I.B.A., City Architect. Dep. £2 2s.
Rochdale.—Alterations.—At Education Offices, Baillie-st., for C.B. B.S.
***Tottenham, N.**—New School.—C. E. Blackbourn, 34, Finsbury Square, E.C.2. Dep. £2 2s.
Wortley.—Painting.—Internal, and decorating at Council's Isolation Hospital at Grenoside, for R.D.C. F. Thurlby, E. and S., Grenoside, near Sheffield. Dep. 10s. 6d.

APRIL 25.

Belper.—Houses.—24 at Denby, 12 Horsley Woodhouse, 4 South Wingfield, for R.D.C. G. Pym, clerk, 122, Bridge-st. Dep. £1 1s.
***Canterbury.**—Houses.—66 houses (24 A2 and 42 A3 type houses) at North Holmes housing site No. 2, Canterbury. R. H. Wanklyn, Town Clerk. Dep. £2 2s.
***Dartford.**—Houses.—Erection of the Heath-lane housing site. Clerk, Council Offices. Dep. £2 2s.
Epsom.—New Municipal Buildings.—For the U.D.C. Clerk, 49, Church.-st. Dep. £3 3s.
Farnborough.—Conveniences, etc.—In Rectory-rd. recreation ground, a similar convenience in Queen's-rd. recreation ground, and tearoom, Osborne-rd. recreation ground, for U.D.C. J. E. Hargreaves, E. and S.
Long Eaton.—Houses.—68 non-parlour type, for U.D.C. H. Raven, architect, Town Hall. Dep. £5 5s.
Rhos.—Painting, etc.—Cleaning, painting and decorating Pennel Baptist Chapel, Rhos, Wrexham. S. Rowley, Central School.
West Riding.—Installation.—Wickersley Council school—installation of electric light; Aughton Council school—pointing, asphalting, w.c. pedestals, etc., and general repairs, for C.C. A. Adcock, divisional clerk, Education Offices, Godstone-rd., Rotherham.

APRIL 27.

Antrim.—Additions.—Also alterations to Masonic hall. J. St. John Phillips, architect, 16, Donegall-sq. So., Belfast.
Basford.—Houses.—Kimberley parish, Swingate site, 30 houses in pairs, together with small roadway; Selston parish, Jacksdale site, 14 houses in pairs; Selston Parish, Portland-rd. site, 10 houses in pairs, for R.D.C. Stephen Maylan, E. and S. Dep. £2 2s.
Chipping Norton.—Cottages.—Two pairs of parlour-type cottages in Lyneham and two pairs of parlour-type cottages in Enstone, and painting external wood and ironwork at 12 cottages at Leafield and their four cottages at Idbury, for R.D.C. S. P. Bendle, S., Enstone-rd., Charlbury. Dep. £2 2s.
Goole.—Building.—Store over existing boys' conveniences at Secondary school, for West Riding E.C. Education Officer, County Hall, Wakefield.
Hemel Hempstead.—Houses.—Erection of 30 houses in Seaton-rd., for the Corporation. Alfred E. Usher, Town Clerk, Town Hall. Dep. £7 7s.
Hull.—Station.—Proposed branch fire station, Southcoates-lane, for T.C. D. Harvey, A.R.I.B.A. City Architect. Dep. £2 2s.
London.—Painting, etc.—Of (1) Albert Bridge, (2) Wandsworth Bridge, for the L.C.C. Clerk, County Hall, Westminster Bridge, S.E.1. Dep. £1.
Maltby.—Installation.—Domestic hot water at Maltby new grammar school, for West Riding C.C. Education Officer, County Hall, Wakefield.
Oldham.—Foundations.—Piled foundation for retort house, for C.B. Ernest Parry, Commercial Manager, Gas and Water Offices, Greaves-st. Dep. £5 5s.
Pontefract.—Installation.—Of low pressure hot water heating apparatus at Pontefract New King's school, for West Riding E.C. Education Officer County Hall, Wakefield.
Skipton.—Houses.—156 on Council's Short Bank-rd. housing site, for U.D.C. A. E. W. Aldridge, E. and S.
Stretford.—Washhouse.—Construction and equipment of washhouse in Carriage-st., off Cornbrook-st., Old Trafford, for U.D.C. Percy Howard, A.R.I.B.A., 88, Mosley-st., Manchester. Dep. £1.
Walton-on-Thames.—Houses.—19 pairs of semi-detached houses in Molesey-rd., Hersham, for U.D.C. R. Wilds, E. and S.
Warrington.—Houses.—20 "A3" type and 12 "A2" type, on Westy-lane site, for C.B. Andrew M. Ker, B.E. and S. Dep. £2 2s.
West Ham, E.—Public Baths.—Erection of, for the Corporation. Town Clerk, Town Hall. Dep. £1.
Willesden. — Sub-Fire-station and Quarters.—Clerk, Town Hall, Dyne-rd., Kilburn, N.W.6. Dep. £2 2s.
Woodhouse.—Pavilion.—Adaption of shed into sports pavilion at Secondary school, for West Riding E.C. Education Officer, County Hall, Wakefield.

APRIL 28.

Dublin.—Additions.—Additions and alterations to shelter sheds at North Wall, Dublin, allocated to L.M. & S. Rly. Co., for Dublin Port and Docks Board, Engineer, East Wall, Dublin, C.10.
Greenwich, S.E.10.—Vapour Baths, etc.—At the Public Baths. Town Clerk, Town Hall, Greenwich-rd. Dep. £1 1s.
Surbiton.—Telephone Exchange.—For H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

APRIL 29.

***Clacton-on-Sea.**—New Court Room and Alterations.—At the Police Station, for the Essex C.C. County Architect, County Hall, Chelmsford. Dep. £2 2s.
Darwen.—Baths.—New public baths in Green-st., for T.C. R.E. Dep. £3.3s.
Edinburgh.—Building.—Alterations at Leith Academy Primary School, St. Andrew's-place, Leith; and workshops and stores, Portobello power station, for T.C. E. J. MacRae, A.R.I.B.A., City Architect.
London.—Building.—Building works, comprising erection and completion of electricity sub-station, at Urswick-rd., at rear of Central Offices, 18-24, Lower Clapton-rd., Hackney, E.5, for B.C. Borough Electrical Engineer, 18-24 Lower Clapton-rd., London, E.5. Dep. £2 2s
St. Helens. — Parr Council Senior School.—Secretary for Education, 17, Cotham-st. Dep. £2 2s.
***Southend-on-Sea.**—Cleaning and Painting.—Of various Council schools, for the Education Committee. John Sargent, Director of Education. Dep. £1.

MAY 1.

***Fulham.**—Dwellings and Lock-up Shops.—For the Borough Council. Borough Engineer, Town Hall, Fulham, S.W.6. Dep. £10 10s.
***Maidenhead.**—School.—New elementary school at North Town for 600 children. H. E. Davies, Clerk to the Education Committee.

MAY 2.

***South Ockendon.**—Hot and Cold Water.—Installation, for the West Ham Corporation. Town Clerk, Town Hall, West Ham, E.15. Dep. £2 2s.

MAY 11.

***Kingsbury.**—House.—Erection of, at the Maternity Hospital, for the Willesden District Council. The Clerk, Town Hall, Dyne-rd., N.W.6. Dep. £2 2s.

MAY 15.

***Manchester.**—Bricks.—Housing Director, Town Hall.

NO DATE.

Ashton-under-Lyne.—Painting.—Certain parts of District Infirmary, Ashton. F. Oliver, General Superintendent.
Bamber Bridge.—Farmhouse.—New farmhouse at Pippin-st. Farm, Brindle. Hy. Rhodes, Seed Lee, Bamber Bridge.
Barnsley. — Garage. — In Blenheim-rd. J. R. Wilkinson, L.R.I.B.A., architect, 15, Regent-st.
***Bournemouth.**—Alterations and Additions.—Christchurch-rd. and St. Peter's-rd. Timothy Whites (1928), Ltd. (Construction Dept.), 30, Chandos-st., Portsmouth.
Chichester.—Residence.—Residence at Westbourne for Mrs. A. Evered. J. Auty, A.R.I.B.A., 44, South-st., Chichester
Drighlington. — Houses. — 64, for U.D.C. T. Grayshon, S. Dep. £2 2s.
Dundee.—Painting.—Required in connection with 84 tenement houses at Corso-st. housing scheme, 4th development, for Corporation. Official Quantity Surveyor.
***Durham.**—Baths.—New public bath and washhouses for the city. John Wilfred Green, City Engineer, Surveyor and Architect. Dep. £5 5s.
Lancashire.—Demolition.—Of residence, "Spring wood," Liverpool East Lancashire-rd., Swinton and Pendlebury, for C.C. H. Swire, resident engineer, Liverpool East Lancashire-rd., Wellesley House, Newton-le-Willows.
Lostwithiel.—Installation.—Of indoor sanitation, bath, etc., at Dannonchapel Farm, St. Teath. Boconnoc Estate Office, Lostwithiel.
***Plaistow, E.13.**—School.—Erection of, in Prince Regent's-lane. John H. Jacques, 61, West Ham-lane, Stratford, E.15 Dep £2
Port Erin.—School.—Proposed new Sunday school, for Trustees of Port Erin Wesleyan Church. J. E. Teare, 46, Athol-st., Douglas, Isle of Man.
Stokeclimsland.—Demolition.—Pulling down, demolition and removal of three cottages, known as Rectory, otherwise Rowe's Cottages, for Launceston R.D.C. G. C. Wilson, Clerk, 16, Westgate-st., Launceston.
Thornhill Lees.—Houses.—Two, at Slaithwaite-rd., Thornhill Lees. R. Thompson's, 47, Prospect-ter., Brewery-lane, Thornhill Lees.

MATERIALS, etc.

APRIL 20.

Bollington.—Road Materials.—For U.D.C. S. Knight, clerk.
Rochdale.—Timber.—For Gas Dept., of T.C. Wm. Henry Hickson, T.C.

APRIL 21.

Argyll.—Paints, etc.—For Argyll and Bute District Mental Hospital, Lochgiphead, Argyll. House Steward.
Bilston.—Road Materials.—For U.D.C. A. F. B. Sidwick, E. and S.
Bolton.—Cement.—Portland Cement, for C.B. B.E. and S.
Kingston-upon-Hull.—Plumber's Materials.—For Electricity Department. J. N. Waite, City Electrical Engineer and Manager, Electricity Works, Sculcoates.

APRIL 23.

London.—Steel.—313 tons of steel girders and other steel and iron work, for G.W.R. F. R. E. Davis, Secy., Paddington Station, W.2. Dep. £2 2s.

NO DATE.

Dumbarton. — Highway Materials. — For C.C. County Road Surveyor, 88, College-st., Dumbarton.

ENGINEERING, IRON AND STEEL.

APRIL 20.

Girvan.—Groyne.—Reinforced concrete groyne, for T.C. Henderson & Nicol, chartered civil engineers, 21, Bridge-st., Aberdeen. Dep. £1 1s.
Johannesburg.—Bridgework.—Structural bridgework for Bloemfontein-Springfontein, Beaufort West-De Aar Section, De Aar-Kimberley Section, for South African Railways and Harbours Administration. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. G.X. 10189.)
Kingston-upon-Hull. — Sidings. — Coal sidings, Ryde-st., for T.C. J. N. Waite, City Electrical Engineer, Electricity Works, Sculcoates-lane. Dep. £2.
Shardlow.—Sewerage.—Sewerage and sewage disposal works at Draycott and Breaston, for R.D.C. Elliott & Brown, chartered civil engineers, Burton-bldgs., Parliament-st., Nottingham. Dep. £3 3s.

APRIL 21.

Ellesmere.—Sewerage.—Sewerage and sewage disposal, for U.D.C. A. H. S. Waters, E., 25, Temple-row, Birmingham. Dep. £5 5s.
Liverpool.—Widening.—Of bridge under Edge-lane, Liverpool, for T.C. City E. Dep. £2 2s.

APRIL 22.

Hendon.—Disposal.—Alterations and additions to sewage disposal works at Honey-pot-lane, Kenton, for R.D.C. H. W. Rackham, E. and S. Dep. £3 3s.
Rauceby.—Engineering.—At Kesteven Mental Hospital, consisting of reorganisation of steam plant, including new Lancashire boiler, economiser, induced draft fan, etc., also modernising of central heating system and hot-water services, etc., for Kesteven C.C. A. D. Piper, clerk, Sleaford.
Roxburgh.—Water Supply.—Laying water main from Kelso Burgh water main on Kelso-Morebattle-rd. to point south-east of Ladyrig and construction of storage tank, for C.C. Kyle & Frew, 227, West George-st., Glasgow, C.2. Dep. £2 2s.

APRIL 23.

Brentford.—Steelwork.—In crane track at Riverside Wharf, Brentford Dock, for G.W.R. F. R. E. Davis, Secretary, Paddington Station, London. Dep. £2 2s.

APRIL 24.

Gillingham.—Sewerage.—15,000 yds. of 9-in., 12-in., 15-in., 18-in., 24-in. and 30-in. stoneware pipe sewers with concrete manholes, road gullies and other appurtenant works at Rainham, for T.C. W. H. Radford & Son, civil engineers, Albion-chams., King-st., Nottingham. Dep. £5 5s.

APRIL 25.

Tadcaster.—Extensions.—To humus tanks and land drainage at Kippax disposal works, for R.D.C. H. W. Boardman, E.

ROAD, SEWERAGE, AND WATER WORKS.

APRIL 20.

Callander.—Pipes.—3,000 lin. yds. of 8-in., 6-in., 4-in., and 3-in. cast-iron pipes, or, alternatively, bitumen-lined steel pipes, together with incidental and relative works, for Keltie supply, for T.C. J. M'Michael, T.C. Dep. £3 3s.
Dublin.—Road.—Spraying with tar and bitumen of approximately 400,000 sq. yds. of road surface, for Corporation. Gerald J. Sherlock, City Manager.
Grimsby.—Sewerage.—2½ miles of salt-glazed and concrete pipes, varying in dia. from 9 in. to 39 in., laid in Yarborough-rd., Great Coates-rd., Little Coates-rd., Laceby-rd. and Bradley-rd., for C.B. H. Gilbert Whyatt, B.E. Dep. £2 2s.
Kingston-upon-Hull. — Main. — Supplying and laying 8-in. cast-iron water main, etc., for T.C. J. N. Waite, City Electrical Engineer, Electricity Works, Sculcoates-lane. Dep. £1.
New Sarum.—Reconstructing.—6,000 sq. yds. of existing carriageway with two-coat asphalt 4 in. thick, including removal of the old road surface, the preparation of foundations, laying concrete foundations where directed and maintenance, for T.C. City E.
Oldham.—Improvements.—Private street works in certain pasages, for C.B. B.E. and S. Dep. £1 1s.

Soyland.—Extension.— 3,500 yds. of 6-in. earthenware sewers, with manholes and other works incidental thereto, at Kebroyd-lane, and also from Stones Chapel to Black Horse Farm, for U.D.C. S. Dep. £1 1s.

Wem.—Dressing.—Spraying 15,000 sq. yds. of road surfaces, for U.D.C. F. Morcom, S.

West Sussex.—Tarring.—Surface tarring of part or whole of approximately 2,500,000 sq. yds. of county roads with refined tar, for C.C. H. W. Bowen, C.S., Chichester.

APRIL 21.

Barton-upon-Irwell.—Making-up.—In township of Flixton, for R.D.C. E. L. Leeming, S. Dep. £2 2s.

Reigate.—Sewerage.—1,000 yds. each of 9-in. and 6-in. dia. foul and surface water sewers and supplying and laying about 550 yds. of concrete kerb, at Woodhatch housing estate, South Park, for T.C. G. G. Sanderson, B.E. and S. Dep. £2 2s.

Tottenham.—Road.—Closing up entrance roadway leading from Philip-lane to Downhills recreation-ground, for U.D.C. Capt. H. F. Wilkinson, E. Dep. 10s.

APRIL 22.

Edinburgh.—Sewer.—Construction of Craig-Crook-rd. sewer, and works, for T.C. B.E., 329, High-st.

Gt. Yarmouth.—Surfacing.—Providing and laying approximately 15,500 super. yds of 2-in. single-coat asphalt and 3-in. two-coat asphalt, on prepared foundations, for C.B. S. P. Thompson, B.E.

Hayes and Harlington.—Making-up.—Of Sandown-rd., Dallas-ter., Harold-av., Sutherland-av., Gordon-crescent, for U.D.C. G. H. Connor, E. and S. Dep. £1 1s.

Leyland.—Making-up.—Of Alice-av., for U.D.C. S.

South Shields.—Paving.—In back Lismore-av. and Sandwich-rd., for C.B. J. Paton Watson, B.E. Dep. £1 1s.

APRIL 23.

Argyll. — Reconstruction.—Construction, reconstruction, and surfacing of fourth section of Arrochar-Inveraray-Lochgilphead-rd. for C.C. County Engineer, County Offices, Lochgilphead, Argyll. Dep. £3 3s.

Ogmore and Garw.—Lay-out.—Works in connection with lay-out of recreation ground at Nantymoel, for U.D.C. W. T. Ollivant Jones, E. and S. Dep. £2 2s.

Reigate.—Repairs.—Cutting out and patching asphalt surfaces and providing and laying surface dressing to asphalt carriageways, for T.C. G. G. Sanderson, B.E. and S. Dep. £1 1s.

APRIL 24.

Caithness.—Reconstruction.—Earthworks, bridges, bottoming, surfacing, drainage, and fencing, 13¼ miles of rd., from Thurso to Reay, for C.C. County Road Surveyor, Wick, Caithness. Dep. £3 3s

Ealing.—Roads and Sewesr.—Construction of, for the Town Council. Town Clerk, Town Hall, W.5.

Merton and Morden. — Widening.—Widening Coombe-lane; Morden Hall-rd. from Central-rd. to Wandle-rd., and sewer 6 in. in dia., Farm-rd, Morden, for U.D.C. G. Jerram, S. Dep. £3.

APRIL 25.

Chipping Sodbury.—Sewerage.—Sewers and manholes in parishes of Yate, Chipping Sodbury and Old Sodbury, comprising approximately 6,800 yds. pipe-line and 88 manholes, for R.D.C. Maynard, Froud & Stevens, engineers, St. Stephen's-chams., Baldwin-st., Bristol. Dep. £2 2s.

East Sussex. — Widening. — Part of London-Brighton-rd. between Muddleswood and Hickstead for total length of 2¾ miles, together with drainage and other contingent works, for C.C. H. E. Lunn, B.Sc., Assoc.M.Inst.C.E., C.S., Lewes. Dep. £100.

Ilford.—Making-up.—Of Keswick-gardens and Windermere-gardens, for T.C. B.E. and S. Dep. £2 2s.

Ilford.—Extensions.—Mid-level (15-in. dia.) and low-level (12-in. dia.) sewer extensions, for T.C. L. E. J. Reynolds, B.E. Dep. £2 2s.

Swindon. — Resurfacing. — Certain carriageways, comprising area of about 10,000 sq. yds., for T.C. B. L. Thompson, B.S., 34, Regent-circus.

Auction Sales, Tenders, etc.

APRIL 23.

***Hackney, E.**—By order of G. W. Thomerson, J. Hibbard & Sons will sell upon the premises, Atlas Works, Tuilerie-st., Stock and Plant. Auctioneers, 15, Newington Green, Islington, N.16.

Public Appointments

APRIL 21.

Chingford, E.4.—Clerk of Works.—Clerk, Town Hall, The Ridgeway.

***Derby.**—(a) Casting Clerk, (b) General Foreman.—Required by the Corporation. Manager, Building Dept., Osmaston-rd.

APRIL 25.

***Gravesend.**—Clerk of Works.—Town Clerk, 4, Woodville-terrace.

APRIL 29.

Greenwich, S.E.10. — Storekeeper-Clerk. — Town Clerk, Town Hall.

APRIL 30.

***Chingford, E.**—Junior Draughtsman and Assistant.—Clerk, Town Hall, The Ridgeway.

JUNE 4.

London, W.1. — **Assistant Examiners.** — **Forthcoming examinations. Assistant examiners in Patent Office. Secretary, Civil Service Commission, Burlington-gardens, London W.1.**

NO DATE.

***Lincoln.**—Assistants.—Required by the Lindsey C.C. H. G. Gamble, Bank-st-chambers.

PROPOSED NEW BUILDINGS & OTHER WORKS*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E. for Board of Education; M.W.B. for Metropolitan Water Board; Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

Accrington.—B.E. to prepare plans for 14 or 18 houses on housing estate at Richmond-hill.—T.C. propose tramway shelter at Baxendale Boundary.—B.E. prepared plans for 72 additional houses on Wood Nook housing estate.

Basford.—Bestwood Coal and Iron Co. propose 32 houses at Bestwood.

Bath.—T.C. to consider convenience near main road at Lambridge.

Berwick.—T.C. approved: Four semi-detached houses at Duns-rd., Gray & Paterson for R. W. Smeaton.

Birmingham.—Corporation obtained sites for houses as follows: Shenley Fields-rd., 4 houses; Highters Heath-rd., The Homestead Farm, 300 houses; Glebe Farm, Yardley, 870 houses; Kingstanding-rd., Perry Barr, 54 houses; and Glenavon-rd., King's Heath, 40 houses. Six police houses, Daisy Farm estate.

Birmingham.—Mitchells & Butler, Ltd., Cape Hill Brewery, Smethwick, proposing reconstruction of "Golden Cross" hotel at Bromsgrove. Watson & Johnson, A.R.I.B.A., architects and surveyors, Winchester House, Vitcoria-sq.—Trustees of Hebrew congregation erecting schools and making alterations to existing buildings in St. Luke's-rd. Architects, Essex & Goodman, FF.R.I.B.A., Waterloo-st.

Bolton.—T. E. Smith & Son, architects, Fold-st., for warehouse in Queen-st., for James Sherry, Ltd., provision merchant.

Bournemouth.—T.C. approved: Extensions, 18/20, Commercial-rd., F. W. Woolworth & Co., Ltd.; alterations, "Hotel Metropole," Holdenhurst-rd., Levy & Franks; additions, "Whitehall Hotel," Exeter Park-rd., J. E. Harrhy; hotel, Cranleigh-rd., Eldridge Pope & Co., Ltd.; additions, motor bus and coach station, The Square, The Hants and Dorset Motor Services, Ltd.; 11 houses, Winsley-av., A. Bedford; 9 houses, (corner) Knole and Southcote-rds., F. W. Davies.

Brampton.—Public Utility Society, Ltd., intend to build 20 houses on land in Union-lane.

Bristol.—Baths Committee of T.C. proposing baths at Shirehampton at £33,406.

Bristol.—T.C. Housing Committee considering following:—provisional agreement for 18 houses fronting Redcatch-lane, Knowle, and mission hall.

Burnley.—T.C. approved:—5 pairs of houses, Coal Clough-lane. Russell Bros.; alterations to Victoria Mill, Trafalgar-st., R. J. Patchett.

Cambridge.—Cambs C.C. received approval of B. of E. to plans for gymnasium at County High School for Girls.

Carlisle.—Plans passed: New premises, English-st., H. E. Scarborough, for Marks & Spencer, Ltd.

Chesterfield.—T.C. approved:—alterations to premises, New Beetwell-st., C. Mason; alterations, business premises, Packers'-row, Swallow & Sons, Ltd.; 4 houses, Holme Bank West, Robinson & Sons, Ltd.

Croydon.—C.B. received M.H. sanction to £28,106 for extension to Thornton Heath baths.—Site on Waddon estate for school.—B.E. to carry out improvement works at Beddington Sewage Farm at £6,500.

Devizes.—T.C. recommend purchase of approximately 3½ acres of land adjoining Caen Hill-gardens, on Bath-rd., for 18 to 20 houses.

Dewsbury.—B.S. to obtain tenders for 44 houses on land fronting to Ravenshouse-rd.—Plans passed: Stanley Press, Ltd., Dewsbury, additions to premises, Commercial-rd.; trustees of Wesleyan Church, Earlsheaton, Wesleyan Sunday school; St. John Ambulance Brigade, Ravensthorpe, headquarters, Garden-st., Ravensthorpe; W. Wormald, 6 semi-detached houses, Bennett-lane; Yorkshire Electric Power Co., Ltd., boiler-house, Thornhill Lees.

Docking.—R.D.C. are procuring site for building at Sedgeford.

Doncaster.—Plans by P. L. Browne & Son, 33, Pearl-bigs., Northumberland-st., Newcastle-on-Tyne, for extensions to Technical College been approved.

Dublin.—Following plans approved by City Architect: 45, Mountjoy-sq., dance hall, William McConnell; Brookfield-rd., 14 houses, Miss Kenny; 2, 3, 4, Rathmines-terr., alterations, Edward Lee & Co.; Goldenbridge Convent, schools, Sisters of Mercy; Kimmage-rd., 23 houses, Saorstat Civil Service Public Utility Society; Donnybrook-rd., showroom, Ever Ready Garage Co.; Conquer Hill-rd., six houses, Woodvale Public Utility Society; Bohemian Picture Theatre, alterations; 5, Upper Ormond Quay, alterations, Bennett & Sons; Shandon Park, nine houses, G. F. Byrne.

Dundee.—Schedules issued for elementary school at Bellfield-st. Architects, Thoms & Walker, FF.R.I.B.A., South Tay-st.

Ealing.—T.C. approved:—The Broadway, Ruislip-rd. (Nos. 18-32 even), 8 shops with flats over, for R. B. Maisland, architects, T. P. Bennett & Son, 41, Bedford-row, W.C.1; Clanson-av. (2-80 even and 1-93 odd), 87 houses, and Russell-rd. (1-15 odd), 8 houses, for C. Peppiatt, 22, Western-av., Acton; Studland-rd., 4 houses, and Mayfield-gardens, 68 houses, for Great Western Land Co., Ltd., Greenford-av., Hanwell; Priory-gardens, Hanger-lane, 14 houses, Twyford-crescent, 94 houses, St. Augustine's-av., 48 houses, and Lytham-grove, 16 houses, for R. Lancaster & Son, architect, S. H. West, 40, The Broadway, Ealing, W.5; Hill View Villas, Greenford-av., 5 houses and garage, Tucker & Warren, architect, R. J. Ward, 107, Uxbridge-rd., W.5; Stapleford-rd., 9 houses, A. Holland, Canal Wharf, Perivale-lane, Wembley; alterations and additions, 69-79 (odd), for John Sanders, Ltd., architects, Hall-Jones & Dewhirst, Ealing; Murray-rd., transformer station, for Ealing Electricity Supply Dept.; The Green, alterations to 9 and 10, for the Aerated Bread Co., Ltd., 17, Camden-rd., N.W.1; Olive-rd., alterations and additions (milk depot), for the London Co-operative Society, Ltd., Whitta-rd., Capel-rd., E.12; South Ealing-rd., alterations to "Parkfield," for London Co-operative Society, Ltd., Whitta-rd., Capel-rd., Manor Park, E.12; The Broadway, W.13, alterations to 30, for —. Hart, architects, Andrews & Peascod, 135, Bow-rd., E.3.

Easington, Oxon.—Site purchased for church and hall.

Easington.—R.D.C. decided to erect bridge over river at Dawdon Dene, and instructed surveyor.

East Barnet.—U.D.C. provisionally accepted tender for arch over East Barnet-rd.

East Ham.—C.B. to carry out fencing around bandstand in Central-pk.—Plans passed:—alterations, 664-666, Romford-rd., H. James & Sons; workshop, garage, etc., London Co-operative Society, A. Hulbert; alterations, 159, High-st. North, Harper & Hodges.

East Riding.—C.C. considering erection of houses for policemen.

Epsom.—R.D.C. approved:—cinema, Godstone-rd., E. O'Sullivan (Kenley), Ltd.; 6 bungalows, Manor-av., Thomas Bros.; 6 shops, Godstone-rd., Whyteleafe, T. W. Stuchberry.

Exeter.—T.C. to apply to B. of E. for enlargement of John Stocker School by providing additional accommodation for 390 children, and to Ladysmith-rd. school by providing additional accommodation for 280 children.

Flegg.—Housing Committee of R.D.C. propose: 34 houses, 10 at East Caister, 5 at Ormesby St. Margaret, 5 at Ormesby St. Michael, 5 at Hemsby, 5 at Winterton, and 4 at Martham.

Fylde.—R.D.C. approved: J. Gregson & Sons, six houses, Joyce-av., pair of houses, corner of Joyce-av. and Preston New-rd., and 14 houses, Joyce-av. and Falkland-av.; T. Threlfall, eight houses, Winton-av.

Gateshead.—Rev. Avery proposes elementary school for 200 children at Low Fell.

Gillingham.—Plans passed: 11 houses and garages, Cleave-rd., C. J. Varrall; 27 houses, Maple-av., F. T. Mattocks, for A. T. Vincent & Son.

Glasgow.—Schedules issued for £70,000 contracts for new offices for Coates, Ltd., at St. Vincent-st. Architect, J. Miller, F.R.I.B.A., 15, Blythswood-sq.

Glasgow.—Transformer house at Fumieston.

Glasgow.—Schedules being prepared by J. Henderson, treasurer, 199, Bath-st., Glasgow, for Barrowfield baths and washhouses. Plans by Council's Architectural Staff.

Gnosall.—Staffs E.C. approved enlargement of junior mixed and infants' Council school.

Grays.—Scheme for improvement at Grays Beach, including provision of paddling pond for children and sun bath. Total cost of £795 approved by Council.

Greenock.—Schedules issued in connection with Dellingburn-sq., Greenock, of a garage for the L.M. & S. Rly. Architects, Steel & Hay, 13, West George-st., Kilmarnock.

Guildford.—Plans for proposed new road and sewers and 16 semi-detached houses in New Cross-rd. for Chapman Building Co., and proposed layout for roads, sewers, and 71 houses in Grange-rd., for R. Holford & Co., been approved by T.C.

Halifax.—B.E. to carry out alterations at Craigie Lea children's home at £338.

Hatfield.—Herts E.C. received B. of E. approval to sketch plans for elementary school to provide accommodation for 480 children, to be erected in Newtown, Hatfield. J. M. Theobald been appointed quantity surveyor.

Hayes.—East Acton Brick & Estate Co. to sewer Hayes Gate estate for 500 houses.—U.D.C. propose: pavilion, Wood End Green recreation ground, £400; pavilion, bowling-green and four tennis courts, Botwell recreation ground, £950.

Hendon.—R.D.C. approved: 99 houses, Green-lane, Edgware, A. W. Curton, Ltd.

Hendon.—Council received B. of E. approval to new elementary school at Deansbrook-lane.

Herts.—E.C. proposing senior school of 640 places on Leggatts-way site, Watford.—Committee to purchase land at Coldharbour Farm for elementary school purposes.—£600 to be spent on fencing land at Harvey-rd., Croxley-green.—Approval given to establishment of junior technical building course at Watford Technical School.

Hove.—Bridge over railway in Olive-rd. (east of Portslade Station) to be proceeded with by T.C. at cost of £4,450.

* See also List of Contracts, Competitions, etc.

Kettering.—Mr. J. T. Blackwell, L.R.I.B.A., Gold-st.-chams., preparing plans for infants' school, Avon-rd., for E.C.

Killearn.—Bank for British Linen Corporation, Ltd., to be constructed at Killearn, Perthshire. Architects, Ross & Buchanan, 189, Pitt-st., Glasgow.

Leighton Buzzard.—Plans passed for factory, Billington-rd., Porubco Hard Courts, Ltd.—Council to buy land for housing.

Leyton.—T.C. approved: F. Richardson, 3 houses; J. & J. Dean, alterations and additions to shop premises, 391 and 393, Hoe-st.

Liverpool.—New church for Norris Green. Architect, B. A. Miller.

Liverpool.—T.C. to apply to M.H. for £8,594 for Everton-rd. nursery school; £636 for purchase of 76, Herondale-rd.; £523 for adaptation and work at Stone House; £475 for purchase of 145-147, Wellington-rd. for site for school; £433 for reconstruction of Butler-st. Council school.—Council proposing to acquire Hof-st., Bancroft-st.; Upper Parliament st., and Falkner-st. for housing purposes.—Subject to approval of B. of E. and M.H., Land Steward and Surveyor to equip Townsend-lane playing field with running track and spectators' stand, at £838.—Plans to be prepared by Land Steward and Surveyor for extension of Holly Lodge High school to provide additional accommodation.

London (Camberwell).—B.C. recommend B.E. and S. to prepare specification to advertise for tenders for repair and redecoration of Art Gallery.—Council recommend £670 for structural repairs to certain properties in Wyndham-rd. area.—Plans passed:—L.C.C., dwellings, Peckham-rd., between Dagmar and Vestry-rds.; H. Weston, caretaker's flat approached from Rye-lane.

London (Chelsea).—Drainage applications approved by B.C.: G. Bardrick & Son, house, 99, Eaton-pl.; Senecal, Ltd., house, 78, Sydney-st.; Senecal, Ltd., house, 16, St. Leonard's-terr.; Mullen & Lumsden, Ltd., house, 23, Glebe-pl.; A. G. Pole & Son, house, 30, Smith-terr.

London (Woolwich).—B.C. £896 for repairs, etc., to library buildings.—R.A.C.S. are to build additions to premises in Lakedale-rd.—Plans passed: Walters & Wood, 246, High-st., Lewisham, on behalf of G. T. Scudamore, 27 houses, Sidcup-rd., Eltham, and 66 houses, Broad-lawn, Eltham; W. J. Brise, Whitehill, Dartford-rd., Dartford, 24 houses, Southwood-rd., Eltham; E. Lefaux, works manager, Henley's Telegraph Works, North Woolwich, copper store and shop at Henley's Works, Henley-rd., North Woolwich.

Lowestoft.—Trawlers & Drifters Supply Stores, Ltd., contemplating alterations to Thirtle Smithy, Whapload-rd.—M.H. approved £400 in defraying provision of lavatory accommodation for men and women on Battery Green Car pk.; and £290 for refreshment room in Battery Green Car-pk.—Plans passed: E. D. Clarke, six houses, Chestnut-av.; E. F. Thain & Co., Ltd., alterations to premises, The Bridge, London-rd.; Trustees of Primitive Methodist Church, additions to premises, Oulton Rock estate.

Lurgan.—Two new Co. Down public elementary schools are to be built, one at Waringstown and other at Moyallen. C. J. Love, Wellington-pl., Belfast, architect.

Luton.—Plans passed: 24 houses, Connaught-rd., H. O. Janes, Ltd.; six houses, Broad Mead, W. Hucklesby.

Malling.—R.D.C. sanctioning of site at Ryarsh for 22 cottages.

Monmouthshire.—B. of E. approved site for proposed new school at Maesglas and sanctioned £2,500. Sites and Buildings Committee received letter from Ministry of Agriculture approving of plans for new women's hostel proposed at Agricultural Institution, at £14,775, and reconstruction of farm buildings, at £3,105.

Motherwell.—Schedules prepared for 60 houses at Coltness, by Andrew Wright, treasurer, 189, Pitt-st., Glasgow. Architect, A. V. Wilson, F.R.I.B.A., Housing Director, Merry-st.

Newbury.—B.S. to prepare plans for 28 houses on surplus land at Camp Close.

Newcastle-on-Tyne.—Governors, Royal Victoria Infirmary proposing new orthopædic department, etc.

Newcastle-on-Tyne.—Plans approved for alterations and improvements to "Hotspur Inn," Percy-st.; "Fountain Hotel," Scotswood-rd.; "Shipwright Arms," Scotswood-rd.; "Adrian's Hotel," Elswick-rd.; "George the First," George-st., and "Villa Victoria," Westmorland-rd.—Alterations are to be carried out at Simpson's Continental Restaurant, Grainger-st.—No building contract yet been placed for church at Walkergate at £39,000. Hicks & Charlwood, 4, Mosley-st., architects.—Wesleyan Chapel in West-rd. S. Kaye, Higham-rd., architect. Tenders invited.—Extensions to premises of J. Lowrie & Co., at Lawrence-st. Architects, Stockwell & Ditchburn, 11, Pilgrim-st.—Marshall & Tweedy, 54, Grey-st., architects for Congregational Church. No building contract placed.—Improvements to be carried out by L.N.E.R. to "Royal Station Hotel."

Newcastle-on-Tyne.—Three schemes for new baths and washhouses have been approved. Architects, L. J. Couves & Partners, Carliol House, Market-st.; Mauchlen & Weightman, 2, Collingwood-st., and Hetherington & Wilson, 52, Westgate-rd.

Northampton.—C.B. approved: Extension to electricity sub-station, Stenson-st., C. & E. Lewis; eight houses, Billing-rd., Loyd-rd., and Wycliffe-rd., R. H. Tibbs & Co., Ltd.; club house, Cotton-end, Northampton Greyhound Racing Association; ladies' cloakroom and conveniences, Bakery, Barry-rd., Northampton Co-operative Society, Ltd.; new conveniences, furniture factory, Broad-st., R. Finnegan; new conveniences, "Duke of York," St. Andrew's-rd., T. Manning & Co., Ltd.

North Ormesby.—William Younger & Co., Ltd., brewers, 5, Exchange-place, Middlesbrough, propose alterations and additions to "Langbaurgh Hotel." Plans by S. H. Clark, architect, 89, Grange-rd., Middlesbrough.

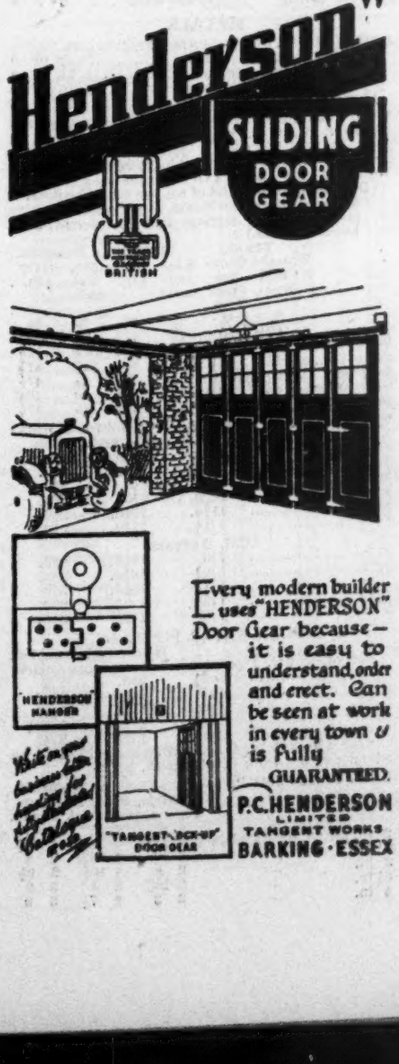
Nottingham.—City Council recommend order for compulsory acquisition of approximately 591¼ acres of land in parishes of Wollaton and Bilborough for housing purposes.—Housing Committee further recommends purchase of property of Wm. Clarke, Ltd., in Finch-st.; also purchase of five plots in Pym-st. district for housing purposes.—Estates Committee to approve application by Housing Committee the use of two pieces of land belonging to Corporation on Wells-rd. for 18 houses.—Council also to authorise construction of roads and sewers at £20,230.

Nuneaton.—T.C. approved lay-out for 216 houses in Hill Top district, Chilvers Coton.

Poole.—T.C. approved: Five houses, Binie-rd., G. Manners; three houses, Sheringham-rd., E. de Wilde Holding for G. Jones; alterations and additions, High-st., Burt & Vick; two pairs semi-detached dwelling houses, Shottsford-rd., W. J. Dacombe for S. Curry; seven houses, Sheringham-rd., Stretch, Baxter & Curry; petrol storage depot (with offices, stores, pump house, etc., Lower Hamworthy-rd., Sealand Petroleum Co., Ltd.; 23 pairs semi-detached dwelling houses off The Esplanade, Sterte, Seal & Hardy for The Hants Land Society, Ltd.; garage and offices, Towngate-st., J. Allner for The Hants & Dorset Motor Services, Ltd.; five lock-up garages, rear of shops, Banks-rd., Rumsby & Rodd for Bay View Estates Co., Ltd.; rebuilding "Shah of Persia" Hotel and four lock-up garages, corner Longfleet and Fernside-rds., H. Kendall for Messrs. Eldridge, Pope & Co., Ltd.; alterations and additions, "Drop Anchor," Banks-rd., W. B. Budden for Capt. H. Kirby; two pairs semi-detached dwelling houses, Hunt-rd., Corbin & Clark.

Portsmouth.—T.C. approved:—McCarthy Bros., 16 houses, Merrivale-rd.; F. D. McLaren, 12 houses, Stride-av.; Dye Bros., 19 houses, Copnor and Amberley rds.; A. H. Le Santo, 6 houses, Merrivale-rd.; F. J. Privett, additions to Danish bacon factory, Goldsmith-av.; C. Atwell, 16 houses, Tangier-rd.; G. McCormck & Son, amended site plan to original plan for 16 houses, Knowsley-crescent, Cosham; G. A. Cooper, lock-up garages, Clarence-st.; J. May, 3 houses, Mayles-rd.; Sealand Petroleum Co., Ltd., petrol depot, Southampton-rd., Paulsgrove.

Preston.—Corporation Electricity Committee report receipt of sanctions for £25,000 for mains, gear and switch-house for the Lytham St. Annes bulk supply; £41,000 for switch gear and switch-house at power station; £15,000 for wiring scheme.



Reddish.—Green Wesleyan A.C. to erect pavilion on sports ground off Priory-lane.

Rochdale.—Housing Committee of T.C. asked B.S. to prepare plans for 100 houses on Spotland Tops estate.

Rotherham.—R.D.C. to borrow £30,000 for housing purposes.

Rotherham.—T.C. to apply to M.H. for £10,580 for erection of 46 houses on Heringthorpe estate for accommodation of aged persons. Plans by B.E.

Rugby.—U.D.C. approved: Office, Cromwell-rd., Warwickshire C.C.; infants' school, Kimberley-rd., Warwickshire C.C.; alterations, National Provincial Bank, Market-pl.; garages, Temple-st., for R.R.D.C.

Seaham Harbour.—U.D.C. inviting tenders for 104 houses. Plans by E.

Southampton.—T.C. approved: 20 houses, King George-av., A. T. Jones; 8 houses, Midanbury-lane, and 4 houses, Trent-rd., S. T. Clark; 4 houses, Eynham-av., A. Passells; 4 houses, Pear Tree-gardens, for Cole & Son; 6 houses, Church-st., and 2 houses, Victor-st., for J. Nias; alterations, Empire Theatre, Commercial-rd., Moss Empires, Ltd.; 6 houses, Knighton-rd., G. B. Underwood; rebuilding premises, 130 and 132, Above Bar-st., British & Colonial Furniture Co., Ltd.; club premises, Warren-crescent, Winchester Brewery Co., Ltd.; garage and workshop, Portsmouth-rd., Wm. Cooper & Co., Ltd.; 4 houses, Sholing-rd., H. W. Piper; 9 shops, stores, and garage, Bitterne-rd., Jackson Bros.; 14 houses, Oak Tree-rd., R. D. Harrison; 4 houses, Radway-rd., G. H. Soper; alterations, Albion Church, St. Mary-st., Trustees of Albion Congregational Church.

Stakeford (Northumberland).—C.C. decided to widen Stakeford bridge, joining Ashington and Bedlington across the River Wansbeck, at £12,000.

Sunderland.—T.C. propose two shelters at Roker-pk., pavilion and shelters at Barley Mow-pk. at £14,000, and pavilion and conveniences at Backhouses-pk. and Barley Mow-pk. at £1,200.

Tipton.—Council to apply to M.H. for purchase for housing purposes of land adjacent to Shrubbery Estate, Dudley-rd.—Approval of M.H. been received to purchase for housing purposes land in Leabrook-rd. and with formal sanction to borrow £1,670 to cover the cost.—Lay-out plan of site provides for two roads and 54 houses, 46 three-bedroom non-parlour type houses and eight two-bedroom non-parlour type.

Twickenham.—For draining and sewering Whitton area, T.C. received sanction of M.H. to loan for £20,850

Tynemouth.—E.C. appointed Hays & Grey, Camden-st., North Shields, as architects for school on Chirton Farm site.

West Hartlepool.—T.C. approved: Harland & Parker, 14 houses, Spring Garden-rd.

West Riding.—C.C. to widen main road from Wragby to Brackenhill at £216,000. Plans by County E. and S.

Wheathampstead.—Herts E.C. reported that Managers of Wheathampstead Church of England School given notice of intention to provide new school accommodation for 160 children.

Whitworth.—U.D.C. propose to remodel the sewage works plant and to convert all remaining pail closets into water carriage system. Cost about £28,400.

Wimbledon.—C. Cunningham to erect building over length of sewer between Amity-grove and Lambton-rd.—H. R. Wilds, of "Woodlands," Hersham-rd., Walton-on-Thames, to build in Pepys-rd.

Wigton.—R.D.C. approved: Addition to Sebergham Castle, for C. J. Wilkinson.

Worthing.—T.C. approved: Shop addition to "Thomas-a-Becket Hotel," High-st., Tarring, Tamplin & Sons Brewery (Brighton), Ltd., per A. B. Packham; 4 houses and garages, Lansdowne-rd., E. B. Hayward per H. M. Potter; 18 garages rear houses in course of erection fronting Bramley-rd and Charmandean-rd., E. J. Woodward per H. M. Potter; hotel, Goring-rd., corner of George V.-av., The Kemp Town Brewery per Denman & Son; four houses and garages, Livesay-crescent, Worthing Estates Building Co., Ltd., per F. G. Abell; conversion into separate premises part of building formerly post office, Chapel-rd., Dixeys, Ltd., per A. T. W. Goldsmith; 4 flats, West-parade, corner of Grand-av., E. H. Barton per A. T. W. Goldsmith

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L.M.B. Sports Association.

We give below results and tables in connection with the Football League of this Association up to Saturday, April 11 :—

RESULTS.

Downs ...	...	5	Portland ...	...	3
Trocoll ...	...	2	Scafco ...	...	1
Wills ...	...	3	Higgs ...	...	0

Elsilrac scratched to Scafco.

TABLE

	P.	W.	D	L.	Goals. F.	A.	Pts.
Wills ...	20	17	2	1	98	20	36
Trocoll ...	19	13	2	4	80	29	28
Scafco ...	21	14	—	7	46	33	28
Portland ...	21	8	4	9	41	50	20
Higgs ...	19	8	2	9	53	48	18
Downs ...	24	6	3	15	38	83	15
Elsilrac ...	22	—	1	21	10	103	1

PRICES CURRENT OF MATERIALS.*

Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	4 3 6
Second Hard Stocks	3 18 6

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
Flettons, at King's Cross	2 11 3	Best Blue Pressed Staffs	9 5 0
Do., grooved for Plaster	2 13 3	Bo. Bullnose	0 15 0
Do., Bullnose	3 5 9	Blue Wire Cuts	7 5 0

White Midhurst Facing Bricks (delivered London site) 5 0 0

Best Stourbridge Fire Brick:—
2½ in. ..... 8 11 0 3 in. 10 3 0

GLAZED BRICKS—

Best White Ivory and Salt Glazed Stretcher ...	21 0 0	D'ble Str'tch'rs	29 10 0
Headers	20 10 0	D'ble Headers	26 10 0
Quoins, Bullnose and 4½ in. Flats	27 10 0	One Side and two Ends ...	30 10 0
		Two Sides and one End ...	31 10 0
		Splays, and Squints ...	28 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

BREEZE CONCRETE SLABS.

Delivered London.

	s. d.		s. d.
2 in. per yd. super	1 11	3 in. per yd. super	2 9
2½ in. ,, ,,	2 4	4 in. ,,	3 6

	s. d.	
Thames Ballast	8 0 per yd	delivered 2 miles radius Paddington
Pit Sand	11 0 ,, ,,	
Thames Sand	11 0 ,, ,,	
Best Washed Sand	11 6 ,, ,,	
½ in. Shingle for Ferro-Concrete	8 6 ,, ,,	
¼ in.	11 0 ,, ,,	
½ in. Broken Brick	10 6 ,, ,,	
Pan Breeze	8 0 ,, ,,	

Per ton delivered in London area in full van loads. Best Portland Cement. British Standard Specification. Test £2 6 0 to £2 8 0 30s. alongside at Vauxhall in 80-ton lots.

Ferrocrete per ton extra on above	0 7 6
Vitocrete ,, ,, ...	0 7 6
Super Cement (Waterproof)	3 16 0
Ciment Fondu (F.O.R. Works)	4 15 0
Roman Cement	8 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
,, ,, Pink	5 10 0
Plaster, Coarse, Pink	3 0 0
,, ,, White	3 12 6
,, Fine	5 12 0
Sirapite, Coarse	3 9 0
,, Finish	3 17 0
Grey Stone Lime	2 10 9
Chalk Lime	2 10 9
Best Ground Blue Lias Lime	1 17 6
Hair .....per cwt.	2 2 6
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s 6d. if returned in good condition within three months carr. pd.

Stourbridge Fireclay in s'cks 37s. 0d. per ton at rly. dp

STONE.

BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube..... s. d. 2 10

BEER STONE—RANDOM BLOCK—
Free on rail at Seaton Station per ft. cube 2 3
Delivered free on rail Nine Elms, S.R. per ft. cube 3 1½
Selected approximate size one way, 1d. per cubic foot extra; selected approximately three sizes or for special work, 3d. per cubic foot extra.

PORTLAND STONE—
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube 4 4½
Do. do. delivered on road wagons at above stations, per ft. cube 4 5½
White basebed, 3d. per ft. cube extra.
NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.

CHILMARK—RANDOM BLOCK—
At Nine Elms, per ft. cube..... 3 11

HOPTON-WOOD STONE—
F.O.R. Quarries, Wirksworth, Derbyshire, s. d.
Random blocks from 10 ft. and over P. ft. cb. 14 0
Sawn two sides ..... ,, 22 6
Sawn three or four sides ..... ,, 27 6

YORK STONE, BLUE—*Robin Hood Quality.*
Delivered at any Goods Station, London
6 in. sawn two sides landings to *sizes* (under 30 ft. super) .....Per ft. super 5 6
6 in. rubbed two sides, ditto..... ,, 6 0
3 in. sawn two sides slabs (random sizes) ,, 2 3½
2 in. to 2½ in. sawn one side slabs (random sizes) ..... ,, 1 6½
1½ in. to 2 in. ditto, ditto ..... ,, 1 3½

HARD YORK—
Delivered at any Goods Station, London.
Scappled random blocks .....Per ft. cube 6 3
6 in. sawn two sides landing to sizes (under 40 ft. super) .....Per ft. super 5 1½
6 in. rubbed two sides, ditto ..... ,, 6 1½
4 in. sawn two sides slabs (random sizes) ,, 2 1½
3 in. ditto ditto ,, 2 10
2 in. self-faced random flags.....Per yd. super 8 0

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 8s. 6d.; Moulded, 9s. 6d.; Cills, 10s. 0d

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£27 10	3 × 6	£20 0
4 × 9	26 0	3 × 11	22 0
4 × 8	25 0	2 × 11	23 0
4 × 7	23 0	3 × 9	22 0
3 × 8	20 0	2½ × 9	22 0
3 × 7	20 0	3 × 4½	20 0
2½ × 7	20 0	3 × 4	20 0

PLANED BOARDS.

1 × 11	£28 0	1 × 9	£26 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
½	18/-	1½	29/-
¾	20/-	1¼	33/-
1	23/-		

TONGUED AND GROOVED FLOORING

Inches.	per sq.
1	24/-
1¼	30/-
1½	34/-

MATCHING (BEST).

Inches.	per sq.
½	16/6
¾	19/-
1	24/-

ins.	BATTENS.	s. d
¾ × 2	.....per 100 ft.	2 6

SAWN LATHS. s. d.
Per bundle 2 0

1 INCH AND UP THICK.

	£ s. d.
Average price for prime quality.	
Dry Austrian Wainscot, per ft. cube.....	0 15 0
Dry American and/or Japanese Figured Oak, per ft. cube.....	0 12 0
Dry American and/or Japanese plain Oak, per ft. cube	0 10 0
Dry sq. edged Honduras Mahogany, per ft. cube.....	0 14 0
Dry log-cut Honduras Mahogany, per ft. cube.....	0 16 0
Dry Cuba Mahogany, per ft. cube	1 1 0
Dry Teak, per ft. cube	0 14 0
Dry American Whitewood, per ft. cube...	0 10 0
Best Scotch Glue, per cwt. ... £4 10 0 to	—
Liquid Glue, per cwt. ..... 4 7 0 to	5 10 0

SLATES

First quality slates from Bangor or Portmadoc carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12	31 0 0	18 by 10	17 5 0
22 by 12	27 19 6	18 by 9	15 10 0
22 by 11	25 5 0	16 by 10	14 14 6
20 by 12	24 7 6	16 by 8	11 5 0
20 by 10	20 17 6		

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons. Per 1,000. f.o.r. London.

	£ s. d.
Best machine-made tiles from Broseley or Staffordshire district	£5 2 6
ditto hand-made ditto	5 7 6
Ornamental ditto	5 12 6
Hip and valley tiles { Hand-made	0 9 6
(per dozen) { Machine-made	0 9 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—

	£ s. d.
R.S. Joists, cut and fitted.....	£12 10 0
Plain Compound Girders	14 10 0
,, Stanchions	16 10 0
In Roof Work	19 10 0

MILD STEEL ROUNDS.—To London Station, per ton

Diameter.	£ s. d.	Diameter.	£ s. d.
⅜ in.	12 0 0	⅝ in. to ¾ in.	10 15 0
½ in.	11 0 0	⅞ in. to 2½ in.	10 10 0

WROUGHT-IRON TUBES AND FITTINGS—
(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

	TUBES. Wrought Mild Steel.	Genuine Staffs. Iron.	FITTINGS. ⅜ in. and under.	Over ⅜ in.	FLANGES. ⅜ in. and under.	Over ⅜ in.
	%	%	%	%	%	%
Gas	62½	50	45	47½	55	57½
Water	58½	46½	40	42½	50	52½
Steam	55	42½	35	37½	45	47½
Galv. gas ...	50	37½	35	37½	45	47½
Galv. water...	45	32½	30	32½	40	42½
Galv. steam	40	27½	25	27½	35	37½

*C.I.—HALF-ROUND GUTTERS.—London Prices ex Works

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	10d.	7½d.	2½d.
3½ in.	10½d.	8½d.	2½d.
4 in.	10½d.	9½d.	2½d.
4½ in.	11½d.	10½d.	2½d.
5 in.	1/1½	11½d.	3½d.

*O.G. GUTTERS.

3 in.	1/0	10½d.	2½d.
3½ in.	1/0½	10½d.	2½d.
4 in.	1/1½	10½d.	2½d.
4½ in.	1/2½	1/0½	2½d.
5 in.	1/6	1/2½	3½d.

*RAIN-WATER PIPES, &c.

Per yd. in 6 ft. Pipe.		Bends, stock Branches, angles, stock angles.	
2 in. plain.....	1/2½	9½d.	1/2
2½ in. ,, ...	1/3	10½d.	1/4
3 in. ,, ...	1/6½	1/1½	1/8½
3½ in. ,, ...	1/11	1/4½	1/11½
4 in. ,, ...	2/2½	1/7½	2/4½

*The above R.W. Goods prices are subject to an advance of 5% from October 29th, 1929.

L.C.C. COATED SOIL PIPES—London Prices ex Works.

	Pipe, angles, stock angles.	Bends, stock Branches.	
	s. d.	s. d.	s. d.
2 in. per yd. in 6 fts. plain	2 1½	1 6½	1 10½
2½ in. ,,	2 6	1 8½	2 4
3 in. ,,	2 8	1 10½	2 9½
3½ in. ,,	2 10½	2 4	3 3
4 in. ,,	3 3	2 7½	3 9

L.C.C. COATED DRAIN PIPES—London Prices ex Works

	Pipe, angles, stock angles.		Bends, stock Branches.	
	s. d.		s. d.	s. d.
3 in. per yd. in 9ft. lengths	3 6		4 3	6 8
cwt. qr. lbs.				
4 in. ,,	1 1 20	4 9	5 2	8 10
5 in. ,,	1 2 22	6 3	9 0	14 3
6 in. ,,	2 0 6	6 11	10 11	18 1

Gaskin for jointing 41/- per cwt.

IRON—	Per ton in London. £ s. d.		£ s. d.
Common bars	11 0 0	to	12 0 0
Staffordshire Crown Bars Good merchant quality	11 5 0	to	12 5 0
Staffordshire Market Bars	14 0 0	...	15 0 0
Mild Steel Bars	9 10 0	...	10 10 0
Steel Bars, Ferro-Concrete quality, basis price	9 0 0	...	10 0 0
Hoop iron, basis price	11 0 0	...	12 0 0
,, Galvanised ...	27 0 0	...	28 0 0
Soft Steel Sheets, Black— Ordinary sizes, to 20 g. ...	11 10 0	...	12 0 0
,, ,, ,, 24 g. ...	13 0 0	...	14 0 0
,, ,, ,, 26 g. ...	15 0 0	...	16 0 0
Sheets Flat Best Soft Steel, C.R. and C.A. quality— Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.....	14 10 0	...	15 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	15 10 0	...	16 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.....	18 10 0	...	19 5 0
No. 1 quality £4 per ton extra.			
Flat and Galvanised Corrugated Sheets— Ordinary sizes 6 ft. to 9 ft. to 20 g.	15 0 0	...	16 0 0
Ordinary sizes 6 ft. to 9 ft. to 22 g. and 24 g.	15 10 0	...	16 10 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	18 10 0	...	19 10 0
Sheets Galvanised Flat, Best quality— Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	20 10 0	...	21 10 0
Best Soft Steel Sheets, 22 g. and 24 g.	22 10 0	...	24 10 0
Best Soft Steel Sheets, 26 g.	24 0 0	...	25 0 0
Cut Nails, 3 in. to 6 in. ...	16 0 0	...	17 0 0

(Under 3 in. usual trade extras.)

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

LEAD, &c.

(Delivered in London.)	£ s. d.
LEAD—Sheet, English, 4 lb. and up	21 0 0
Pipe in coils	21 10 0
Soil pipe	24 10 0
Compo pipe	25 10 0

NOTE.—Country delivery, 20s. per ton extra; lots under 3 cwt. 3s. per cwt. extra, and over 3 cwt. and under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes, 5s. cwt. extra.

Old lead, ex London area, at Mills .....per ton	£11 0 0

COPPER.

	s. d.
Seamless Copper tubes (basis) ..... per lb.	1 3
Strong sheet..... ,,	1 0
Thin ..... ,,	1 1
Copper nails..... ,,	1 7
Copper wire ..... ,,	1 4

PLUMBERS' BRASS WORK.
Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/-	45/-	76/-	153/-	246/-	510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
41/6	62/-	92/-	174/-	300/-	588/- per doz

RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in.	¾ in.	1 in.
39/6	60/-	116/6 per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
7/6	11/-	17/-	29/-	36/-	63/- per doz.

BRASS SLEEVES.

1¼ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES, S.F.

½ in.	¾ in.	1 in.	1¼ in.
35/-	56/-	98/-	162/- 228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.

	1¼ in.	1½ in.	2 in.	3 in.
8 lbs. P. traps ...	33/-	41/-	56/-	101/- per doz.
8 lbs. S. traps ...	35/-	45/-	66/-	126/- ,,

TIN.—English Ingots, 1/5 per lb. SOLDER.—Plumber's 8d., Tinmen's 10d., Blowpipe 11d. per lb.

PAINTS, &c.

Raw Linseed Oil, in pipes	per gallon ...	0	2 1
,, ,, ,, in barrels ...	,, ...	0	2 3
,, ,, ,, in drums ...	,, ...	0	2 4
Boiled ,, ,, in barrels ...	,, ...	0	2 5
,, ,, ,, in drums ...	,, ...	0	2 6
Turpentine in barrels	,, ...	0	3 10
,, in drums (10 galls.)	,, ...	0	3 10
Genuine Ground English White Lead, per ton		45	10 0

(In not less than 5-cwt. casks.)
Extra for 1-cwt. kegs over 5-cwt. casks is 5/0 cwt.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS —(*cont.*)

PAINTS, &c.—(*cont.*)

GENUINE WHITE LEAD PAINT.

	£ s. d.
"Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polacco," "J" Brand, and other best brands (in 14-lb. tins) not less than 5 cwt. lots per ton delivered	63 10 0
Red Lead, Dry (packages extra) ..per ton	31 10 0
Best Linseed Oil Putty ..... per cwt.	0 13 6
Filleol ..... ,,	0 16 6
Size. XD quality ..... /kn.	0 3 0

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

Per ft.		Per ft.
15 oz. fourths.. 2½d.	32 oz. fourths	6½d.
15 ,, thirds 3½d.	32 ,, thirds	9d.
21 ,, fourths 3½d.	Obscured Sheet, 15 oz. ..	3½d.
21 ,, thirds . 4d.	,, 21 oz.	4½d.
26 ,, fourths .. 4½d.	Fluted, 15 oz. 7d., 21 oz.	9½d.
26 ,, thirds 6½d.	Em'lled, 15 oz. 4½d., 21 oz.	6d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED plate in CRATES OF STOCK SIZES.

	Per ft.
⅛ Rolled plate	4½d.
⅛ Rough rolled	5½d.
Rough rolled	5½d.
Figured Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish White..	5½d.
Ditto, tinted	8d.
Rolled Sheet	4½d.
White Rolled Cathedral	4½d.
Tinted do.	6½d.

Cast plate is same price as rough rolled.

"VITA" GLASS.	Per foot. s. d.
Clear sheet—not exceeding 1 foot	1 0
Do. do. 2 feet	1 3
Do. over 2 feet	1 9
Polished plate—not exceeding 1 foot	1 6
Do. not exceeding 2 feet	3 0
Cathedral—not exceeding 1 foot	1 0
Do. larger sizes	1 6
Horticultural—for greenhouses, etc. Sizes up to 24 inches by 18 inches or not exceeding 3 feet	1 0
3/16 in. Wired Georgian Design. Sizes up to 108 inches long by up to 24 inches wide ..	2 0

VARNISHES, &c.

		Per Gallon. £ s. d.
Oak Varnish	Outside	0 14 0
Fine ditto	ditto	0 16 0
Fine Copal	ditto	0 18 0
Pale Copal	ditto	1 0 0
Pale Opal Carriage	ditto	1 4 0
Best ditto	ditto	1 12 0
Floor Varnish	Inside	0 18 0
Fine Pale Paper	ditto	0 18 6
Fine Copal Cabinet	ditto	1 2 6
Fine Copal Flatting	ditto	1 0 0
Hard Drying Oak	ditto	0 18 0
Fine Hard Drying Oak.....	ditto	0 19 6
Fine Copal Varnish	ditto	1 0 0
Pale ditto	ditto	1 12 6
Best ditto	ditto	1 2 6
Best Japan Gold Size		0 12 0
Best Black Japan		0 10 0
Oak and Mahogany Stain (water)		0 12 0
Brunswick Black		0 7 0
Berlin Black		0 14 0
Knotting (patent)		1 5 0
French and Brush Polish		0 17 0
Liquid Dryers in Terebene		0 9 0
Cuirass Black Enamel		0 7 0

PATENTS

APPLICATIONS PUBLISHED.

343,103.—W. Szpakowski : Means for covering roofs.

343,106.—A. Smallwood : Clamp or retaining-device for structural tubes and bars.

343,067.—Johns-Manville Corporation : Constructions for absorbing and dissipating sound.

343,022.—H. C. Liebold : Device for the production of the bases of columns or pillars or similar building units from concrete.

343,166.—Masa Ges. zur Herstellung Kunstlicher Oberflachen : Superficial ornamentation for metal and wood.

343,217.—Stanton Ironworks Co., Ltd., and P. H. Wilson : Jointing of pipes.

343,244.—Parker, Winder & Achurch, Ltd., and H. Thompson : Latch for doors.

343,293.—Schoeller-Bleckmann Stahlwerke Akt.-Ges. : Manufacturing hollow jumper steels.

343,290.—T. P. Hingley : Construction of coupling or clamp for scaffolding.

343,301.—C. M. Macnamara, and J. C. Murray : Domestic fireplaces.

343,310.—T. Neilson, and J. Marshall : Ventilating and air-supply systems.

Note.—Period for opposition expires April 25, 1931.

THE SCOTTISH BUILDER

NEW BUILDINGS

Aberdeen.—CHURCHES.—The Presbytery of Aberdeen have decided on church extension work in the Pittodrie and School-road areas. The proposal is to build a new church in School-road, near its junction with King-street, and the erection of a hall in the Pittodrie area.

Alexandria. — SCHOOL. — Mr. J. Weekes, County Architect to the Dumbarton C.C., 18, Park-circus, Glasgow, C.3, is inviting tenders for a new primary school.

Banff.—SWIMMING POOL.—Plans have now come to hand from the engineers, Messrs. Henderson and Nicoll, Aberdeen, of the swimming pool for Banff, which it is proposed to construct near the links.

Edinburgh. — BUILDING.— The Edinburgh Dean of Guild Court has passed the following :—184 houses and two shops at Niddrie Mains housing area, Niddrie Mains-road, for T.C.; James Miller, 4, Gayfield-place, 34 houses at Craighouse-terrace; Scott and Co. (Builders), Ltd., 116, Hanover-street, house and garage at Cadogan-road, Liberton.

Glasgow.—BUILDING.—Plans were passed by Glasgow Dean of Guild Court for several important building and reconstruction schemes in the city. It is estimated that an addition to the High School will cost between £50,000 and £60,000. The architects are Messrs. Watson, Salmond and Gray, Glasgow. Plans were also passed for Glasgow Corporation Transport Department, extensions at Helenvale-street depot; Scottish Co-operative Wholesale Society, Ltd., 95, Morrison-street, additions to factory in Maxwell-road, at Renfrew-road; Bank of Scotland, reconstruct premises at 464-486, Victoria-road; Savings Bank of Glasgow, bank buildings at 167-169, Castle-street, and 4-10, Monkland-street; Trustees of Shettleston Baptist Church, church hall at the corner of Amulree-street and Glenalmond-street, Shettleston.

Glasgow.—DOCK.—The Clyde Navigation Trustees decided to proceed with a scheme for the lowering of the floor of No. 3 graving dock at Govan. The scheme has been approved by the Unemployment Grants Committee. The estimated cost of the scheme is £32,000.

Hawick.—HOUSING.—The T.C. are considering a housing scheme adjoining Lynnwood cottages.

Hawick (Near).—BRIDGE.—Roxburghshire C.C. agreed to proceed with the construction of a bridge at Branxholme, at a cost of approximately £20,000.

Moray.—IMPROVEMENTS.—The Roads Committee of Moray C.C. approved of the proposal to construct a new viaduct at the Drumlachs on the Keith-Fochabers road at a cost of between £8,000 and £10,000.

Motherwell.—HOUSING.—The Dean of Guild Court of the Burgh of Motherwell and Wishaw passed plans for the erection by the Corporation of 80 dwelling-houses in Wellington-street, Motherwell, at a cost of £25,688. The County of Lanark had plans passed for the erection of a temporary school. The school is to cost £2,000

BUILDING TRADE WAGES IN SCOTLAND*

The following are the present rate of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

	Masons.	Brick-layers.	Car-penters, Joiners.	Plas-terers.	Slaters.	Plum-bers.	Painters.	Labourers—Masons'‡ Bricklayers'† Plasterers'.†
Aberdeen	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Airdrie	1/7	1/7	1/7	1/8	1/7	1/7	1/7	‡1/2½ †1/2½
Alexandria	1/7	1/7	1/7	1/8	1/7	1/7	1/7	‡1/2½ †1/2½
Arbroath	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Ayrshire	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Bathgate	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2 1/3
Berwickshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1½
Bo'ness	1/7	1/7	1/7	1/8	1/7	1/7	1/7	†1/2½
Broughty Ferry	1/7	1/7	1/7	1/8	1/7	1/7	1/7	‡1/2½ †1/2½
Clackmannanshire	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Coatbridge	1/7	1/7	1/7	1/8	1/7	1/7	1/7	‡1/2½ †1/2½
Dumbartonshire	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Dumfries	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Dumfriesshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1½
Dundee	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Dunfermline	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Dunoon	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
East Lothian	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Edinburgh	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Falkirk	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Forfarshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1½
Fort William	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/2
Gainshiels	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Glasgow	1/7½	1/8	1/7½	1/8½	1/7½	1/7½	1/7	1/2½
Greenock	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Hamilton	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7	‡1/2½ †1/2½
Hawick	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Helensburgh	1/7	1/7	1/7	1/8	1/7	1/7	1/7	‡1/2½ †1/2½
Inverness	1/5	1/5	1/5	1/5	1/5	1/5	1/6	10d.–1/2
Inverurie	1/6½	1/6½	1/6½	1/7½	1/6½	1/6½	1/7	1/2
Kilmarnock	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7	1/2½
Kincardineshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Kinross-shire	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Kirkcaldy	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Kirkwall	1/5	1/5	1/5	1/6	1/5	1/5	1/7	1/–
Lanarkshire	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Leith	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Midlothian	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Motherwell	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7	‡1/2½ †1/2½
Peeblesshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Perth	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Perthshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1½
Peterhead	1/6½	1/6½	1/6½	1/7½	1/6½	1/6½	1/7	1/2
Renfrewshire	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Rothesay	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Roxburghshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1½
St. Andrew's	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Selkirkshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Stirling	1/7	1/7	1/7	1/8	1/7	1/7	1/7	‡1/2½ †1/2½
Stirlingshire, West	1/6	1/6	1/6	1/6	1/6	1/6	1/7	1/1
Stornoway	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
West Lothian	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Wishaw	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7	‡1/2½ †1/2½

* The information given in this table is copyright. The rates of wages in various towns in England and Wales are given on page 731.

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	9	9
Add if in clay	,, ,,	1	0
Add for every additional depth of 6 ft.	,, ,,	0	6
Planking and strutting to trenches	per foot super	0	4
Do. to sides of excavation, including shoring	,, ,,	1	0

CONCRETOR.

Portland cement concrete in foundation 1 to 6	per yard cube	30	0
Add if in underpinning in short lengths	,, ,,	6	0
Add if in floors 6 in. thick	,, ,,	2	6
Add if in beams	,, ,,	3	0
Add if aggregate 1 : 2 : 4	,, ,,	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	,,	2	0

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	30	0	0
Add if in stocks	,,	7	10	0
Add if in Staffordshire blues	,,	22	0	0
Add if in Portland cement and sand	,,	1	5	0

FACINGS.

Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft super	0	0	1½

POINTING.

Neat flat struck or weathered joint	,, ,,	0	0	3

ARCHES.

Extra only to the price of ordinary brickwork:—				
Fair external in half brick rings	,, ,,	0	0	10
Axed in stocks	,, ,,	0	1	9
Rubbed and gauged jointed in putty camber or segmental	,, ,,	0	6	0

SUNDRIES.

Damp course in double course of slates breaking joint and bedded in Portland cement	,, ,,	0	1	0
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	,,	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard super	4	6
Three-quarter-inch vertical damp course	,, ,,	9	6
Three-quarter-inch on flats in two thicknesses	,, ,,	6	0
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	,, ,,	1	0

MASON.

York stone templates fixed	per foot cube	13	0
York stone sills fixed	,, ,,	22	0
Bath stone and all labour fixed	,, ,,	10	6
Beer stone and all labour fixed	,, ,,	15	0
Portland stone fixed	,, ,,	20	0
Chilmark stone fixed complete	,, ,,	17	6

SLATER.

Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	72	9
Do. 20 in. × 10 in. Do. Do.	,,	80	9
Do. 24 in. × 12 in. Do. Do.	,,	90	0

CARPENTER AND JOINER.

Fir framed in plates	per foot cube	4	6
Do. joists	,, ,,	5	0
Do. roofs, floors and partitions	,, ,,	5	6
Do. trusses	,, ,,	8	6

		¾"	1"	1½"	2"
Deal rough close boarding	per sq.	33/6	38/-	43/-	70/-
Flat centering for concrete floor, including struts or hangers	,,				50 0
Do. to beams	per ft. sup.				0 9
Centre for arches	,,				1 6
Gutter boards and bearers	,,				1 0

FLOORING.

		¾"	1"	1½"	1½"
Deal-edges shot	per sq.	—	42/6	50/-	57/6
Do. tongued and grooved	,,	—	47/-	56/-	64/-
Do. matchings	,,	44/-	49/-	—	—
Moulded skirting, including backings and grounds	per ft. sup.	1/6	1/9	2/-	2/6

SASHES AND FRAMES

		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	,, ,,	2	1
Add for fitting and fixing	,, ,,	0	3
Deal-cased frames with 1 in. inner and outer linings, 1¼ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights; average size	,,	3	9

DOORS.

		1¼"	1¾"	2"
Two-panel square framed	per ft. sup.	2/1	2/3	2/5
Four-panel Do.	,,	2/4	2/6	2/9
Two-panel moulded both sides	,,	2/6	2/9	2/11
Four-panel Do. Do.	,,	2/9	2/11	3/2

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

		1"	1¼"	1½"
Plain deal jamb linings framed	per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers	,,	1/4	1/6	1/9
Add if cross-tongued		2d.	2d.	2d.

STAIRCASES.

	1"	1¼"	1½"	2"	2½"
Deal treads and risers in and including rough brackets	2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed	1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. × 1¼ in.	per ft. run	0	9
Mahogany handrail: average, 3 in. × 3 in.	,, ,,	6	0
Add if ramped	,, ,,	12	0
Add if wreathed	,, ,,	24	0

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	16	3
Plain compound girders	,,	19	0
Do. stanchions	,,	21	9
In roofwork	,,	27	6

RAIN-WATER GOODS.

		3"	4"	5"	6"
Half-round plain rebated joints	ft. run	1/4	1/7	1/9	2/-
Ogee Do. Do.	,,	1/6	1/9	2/3	2/9
Rain-water pipes with ears	,,	1/6	2/4	—	—
Extra for shoes and bends	each	3/4	4/11	—	—
Do. stopped ends	,,	1/6	1/10	2/9	3/3
Do. nozzles for inlets	,,	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	42	0
Do. Do. in flats	,,	41	0
Extra labour and solder in coated cesspools	each	6	9
Welf joint	per ft. run	0	6
Soldered seam	,, ,,	1	3
Copper nailing	,, ,,	0	3

		½"	¾"	1"	1½"	2"	4"
Drawn lead waste	per ft. run	1/1	1/7	1/10	3/-	3/6	—
Do. service	,,	1/6	2/-	2/5	3/6	—	—
Do. soil	,,	—	—	—	—	—	6/-
Bends in lead pipe	each	—	—	—	—	3/-	6/6
Soldered stop ends	,,	1/-	1/4	1/9	2/6	3/2	—
Red lead joints	,,	11d.	1/-	1/3	1/11	2/4	4/10
Wiped soldered joints	,,	2/6	3/-	3/6	4/4	5/6	7/9
Lead traps and cleaning screws	,,	—	—	—	12/7	17/6	—
Bib cocks and joints	,,	6/4	9/7	15/4	41/-	—	—
Stop cocks and joints	,,	15/4	17/2	25/8	64/-	—	—

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	5
Do. Do. Sirapite	,, ,,	2	8
Do. Do. Keen's	,, ,,	3	10
Add saw lathing	,, ,,	1	7
Add metal lathing	,, ,,	2	6
(Not including hangers or runners, etc. for suspended ceilings.)			
Portland cement screed	,, ,,	2	2
Do. plain face	,, ,,	3	3
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	5	3

GLAZIER.

		s.	d.
21-oz. sheet plain	per foot sup.	0	8½
26-oz. Do.	,, ,,	1	0
Obscured sheet	,, ,,	1	1
¼-in. rolled plate	,, ,,	0	9
¼-in. rough rolled or cast plate	,, ,,	0	10½
¼-in. wired cast plate	,, ,,	1	4

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	,, ,,	0	7
Plain painting, 1 coat	,, ,,	0	9
Do. 2 coats	,, ,,	1	2
Do. 3 coats	,, ,,	1	9
Do. 4 coats	,, ,,	2	4
Graining	,, ,,	2	3
Varnishing twice	,, ,,	1	9
Sizing	,, ,,	0	3
Flatting	,, ,,	0	7
Enamel	,, ,,	1	1
Wax polishing	per foot sup.	0	6
French polishing	,, ,,	1	2
Preparing for and hanging paper	per piece, 2/- to 4/-		

*These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Acts and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

TRADE NEWS

Concrete in Wales.

The telephone number of the Welsh office of the British Reinforced Concrete Engineering Co., Ltd., is : Cardiff 5938.

Change of Address.

Messrs. Stevens & Manning, suppliers of wire gauzes and sieves, have moved to more commodious quarters close to Borough High-street Station : 1-3, Disney-street, Redcross-street, Marshalsea-road, S.E.1.

"Pneumatic Despatch Tubes."

Full information and installation data on the fitting of pneumatic despatch tubes into industrial buildings, shops and stores, etc., is contained in a booklet (1901) which the Sturtevant Engineering Co., Ltd., 147, Queen Victoria-street, E.C.4, issue to anyone interested.

Stock List of Hardwoods.

Messrs. Hahn & Co., Alexandra Wharf, Tidal Basin, E.16, have issued a stock-list for use of builders who want Austrian oak, Russo-Volhynian oak billets, Japanese and American oaks, American whitewood, mahogany logs, etc., of which the firm in question has a varied stock.

A Key for Rendering.

Messrs. G. and T. Earle, Ltd., of Hull, have issued a leaflet entitled "A Key for Cement and Plaster Rendering" (Tec. 17), in which attention is drawn to the properties of "Retardo" No. 1, a liquid which, when painted on shuttering before the concrete is placed, retards the setting of the concrete on the face, so that it can be finished off. This leaves the aggregate exposed forming a key for cement or plaster rendering. Among other jobs, "Retardo" No. 1 has been used on the New North Bridge, Hull.

Portland Cement for Lithuania.

His Majesty's Consul at Kovno reports that the Supply Service Department of the Lithuanian Railway Administration is calling for tenders to be presented in Kovno by April 23 for the supply of 3,000 barrels of Portland cement in conformity with the specification laid down by the German Ministry of Communications. Firms desirous of offering cement of British manufacture can obtain further particulars of this call for tenders upon application to the Department of Overseas Trade, 35, Old Queen-street, S.W.1. Reference number B.X.7055 should be quoted.

The late Mr. T. M. Farmiloe.

The funeral took place on Wednesday afternoon, April 8, of Mr. Thomas Meakin Farmiloe, of Avening House, Arkwright-road, London, N.W., who died suddenly on the 30th ult. at Cannes, where, with his wife, he was spending a holiday. The late Mr. Farmiloe, who was 73 years of age, was the managing director of Messrs. George Farmiloe and Sons, of St. John-street, E.C. He was an enthusiastic sportsman, being especially keen on shooting and cricket, and was a member of the M.C.C. Highly esteemed by all with whom he came in contact for his genial and kindly disposition, his sudden death is deeply regretted by a wide circle of friends.

Industrial Motors.

A data sheet of a very comprehensive nature has been issued by Messrs. Singer & Co., Ltd., for their range of industrial motors. Printed in two colours and devised as a supplement to the informative Singer catalogue recently issued, it contains many vital facts concerning the firm's commercials. It is divided into two sections, dealing respectively with the complete vehicles—eight models in all—and the six chassis, which form the Singer industrial motors range. Almost every question that might be asked concerning Singer dimensional specifications is answered explicitly by this sheet, and it should be invaluable both to the retail motor trade and to prospective purchasers of Singer vehicles. A copy can be obtained on application to Messrs. Singer & Co., Ltd., Coventry.

A STAGE PRESENTATION.

THE Julian Players, a party of local amateurs, presented a very successful entertainment at the Brotherhood Hall, West Norwood, on April 1, in aid of the funds of the sports club of Messrs. F. & H. F. Higgs, Ltd., of South London. The play was Keble Howard's farcical comedy, "Lord Babs." The club, whose ground is in Grange-lane, Dulwich, participate in all classes of sport, and have at their head Mr. Basil C. Aldous, their president. Mr. Robert Hurst, who played the part of Dr. Richard Neville, is a member of the club. The play was well staged and thoroughly well performed, and it can be said that the Julian Players achieved a very great success. The chief rôle fell upon Mr. John Hurst, who played his part extremely well throughout. Miss Ann Farmer, as Clara, played excellently, and Gladys Ayling was very successful as Lady Joan, Basil's cousin. Violet Lamb as the Countess was very effective in her primness of the early Victorians, and Winifred Pearce, the nurse, scored well not only with her Scottish accent, but with her liking to something from the bottle which has made that country famous and its many distillers prosperous. Mr. Robert Hurst (Dr. Richard Neville) played a remarkable rôle in the more sedate character as the village practitioner. The producer, Mr. Ernest Parker, must be complimented on his very fine work. The orchestra was under the able direction of Mr. F. C. Bourne.

PATTERN STAINING OF PLASTERS.

WHEN disfiguration by dirt of the walls happens very soon after a building is finished and takes the peculiar form of silhouetting the beams and laths under the plaster in a kind of X-ray picture, the architect and his clients are justifiably annoyed, especially when it is found that after redecoration the same trouble occurs. This phenomenon is known technically as "the pattern-staining of plasters," and it has recently been the subject of so many inquiries addressed to the Building Research Station that the Department of Scientific and Industrial Research has issued a short bulletin (Building Research Bulletin No. 10) dealing with its prevention. Pattern staining occurs usually in buildings where the air above the plaster is for long periods at a different temperature to that in the room below, as, for example, in the case of a loft above the ceiling of a church or public hall. In such cases the plaster under the laths will be warmer than the rest of the ceiling, and there will be, therefore, corresponding differences in the air pressure acting on smoke particles floating in the atmosphere near the ceiling. The net result is that more particles are driven towards the colder parts of the ceiling, so that ghosts of the wooden lathing appear as white bands on a darker ground.

Obviously the remedy is to equalise the temperatures of the different parts of the ceiling. One method is to employ an increased thickness of plaster, preferably of low heat-conductivity; a second method is to coat the ceiling with thick paper of a special honeycomb construction; but the best method of all, when it can be applied, is to provide thermal insulation for the ceiling by introducing such substances as cotton wool mixed with slag wool or pressed straw slabs above the plaster. This method not only prevents pattern staining, but also reduces the total smoke deposit on the ceiling. The use of ordinary papers, high gloss paints, or lead foil to the plaster surface has been shown to be useless in preventing the recurrence of the stains.

Rent for Municipal Houses.

Miss Lawrence, in the House of Commons, informed Miss Rathbone that the full rent required to be charged for a municipal house costing £400, without Exchequer or rate subsidy, was approximately 10s. 6d. a week, exclusive of rates.

TENDERS

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted.*
† Denotes *provisionally accepted.*
‡ Denotes *recommended for acceptance.*
§ Denotes *accepted subject to modifications.*
¶ Denotes *accepted by H.M. Office of Works and H.M. War Office.*

Aberdeen.—Extension of heating system at central police offices, Lodge-walk, for the T.C. Mr. T. F. Henderson, City Engineer and Water Engineer :—
*John F. Anderson, 33, Summer-street, Aberdeen £153

Ashton-under-Lyne.—Fire station on site rear of the Town Hall, for the Corporation. Messrs. W. H. George & Son, architects, 7, Warrington-street :—
*Edwin Marshall & Son, Ltd., Stamford Saw Mills, Ashton-under-Lyne.
Steelwork—*Edward Wood & Co., Ltd., Manchester.

Bacup.—Public conveniences at the corner of Lord-street and Bank-street, adjoining the Open Market, for the Corporation. Borough Engineer :—
*Henry Trickett & Son, Ltd., Crawshawbooth, Rawtenstall, Lancs.

Beeston.—16 parlour and 74 non-parlour type houses on Tennis-avenue and Boundary-road, Beeston Fields Farm estate, for the U.D.C. Mr. Ernest A. Bush, surveyor :—
*Hofton & Son, Beeston £28,570

Blaby.—Fourteen houses at Croft, for the R.D.C. Mr. G. Grayling, surveyor, Atlas-chambers, Leicester.
Per house.
*G. Calverley & Sons, Leicester £375

Blean.—16 or 13 semi-detached pairs of houses, of alternative design, at Broad Oak, in parish of Sturry, near Canterbury, for the R.D.C. Mr. F. A. Ward, surveyor, Herne Common, Herne Bay :—
‡F. J. Gates & Sons, Herne Bay.

Borth.—Bungalow, for Mr. E. M. Bowen. Mr. C. F. Ellis, L.R.I.B.A., chartered architect, Aberdovey :—

John J. Edwards & Sons, Aberystwyth	£1,157
Evans Bros., Mont.	995
Edmund Jones, Aberdovey	894
Lewis J. Evans, Tregaron	838
*T. Jones & Sons, Dole, Llandre, Cardiganshire	800

Braintree.—Improvements at the children's nursery at the institution, for the Essex C.C. :—
*Livermore & Son, Braintree £290

Bury.—Internal decoration of the third-class plunge bath in St. Mary's-place, for the T.C. :—
*Sedgwick & Co., 318, Ainsworth-road, Bury.

Bury.—Block of five shops of sectional wood construction on the Market-ground, for the T.C. :—
*Robert Booth, 38, Chesham-road, Bury.

Bury.—Switchhouse control-room and offices at Chamber Hall power station, for the C.B. Borough Engineer, Bank-street :—
General contractor—*Otto Elton, Rochdale-road, Bury.
Steelwork—*J. Webb & Son, Irwell Forge, Bury.

Carlisle.—Transformer station at Crow Hall, Brampton, for the T.C. Mr. Percy Dalton, City Engineer and Surveyor, 18, Fisher-street :—
*Ridley Bros., Brampton £288 6 6

Castleford.—Extensions to the St. Joseph's R.C. day schools, comprising new class rooms and practical room and laundry Messrs. R. A. Easedale & Sons, architects :—
*L. J. Gallagher & Sons.

Chertsey.—Interior and exterior decorations at Isolation Hospital, Ottershaw, for Chertsey Rural and Chertsey, Walton-on-Thames, Weybridge and Windlesham Urban District Councils' Joint Hospital Committee. Mr. F. J. Wareham, clerk, Council Offices, West Byfleet :—
*Lilly & Sons, Clapham Common £313

Chesterfield.—Reconstruction of Brookside Bridge, connection with the widening of Chatsworth-road, for the T.C. :—
*C. S. Tomlinson, Alfreton £2,423

Coundon.—New schools at Coundon, for the Durham C.C.—
*Pearson & Co., Hartlepool.

Co. Durham.—Public elementary school at Shield Row, Stanley, for the E.C. Mr. F. Willey, F.R.I.B.A., architect, 34, Old Elvet, Durham :—
*Direct labour.

Croydon.—Extension of the showroom sub-station in Surrey-street, for the C.B. :—
*E. H. Smith £396

Croydon.—Extension of Thornton Heath Pond conveniences, for the C.B. :—
*C. H. Gibson, Ltd., Croydon £1,495

Darlington.—Alterations and additions at the Grammar school, for the Corporation :—
*R. Blackett & Son, Bondgate, Darlington.

Doncaster.—Rebuilding "Blue Bell" Hotel, Baxter-gate, including modern shop and showroom, for Messrs. Joshua Tetley & Sons, Ltd., The Brewery, Leeds. Messrs. T. H. Johnson & Son, A.R.I.B.A., architects, 20, Priory-place:—

*Knights (Contractors), Ltd., Doncaster.

Doncaster.—Two pavilions, workshop, etc., and cottages for South-West Yorkshire Joint Board for Mentally Defective, St. Catharines. Mr. Vincent Turner, architect, Municipal Offices:—

*Thomson & Dixon (Doncaster), Ltd., Balby, Doncaster.

Dorking.—Building improvements at "Pippbrook," Reigate-road, for the U.D.C. Mr. S. S. Gettings, surveyor:—

Fencing—*Astolat Co., Ltd., Peasmarsh, Guildford.
Roadway, footpath and drainage—*Morrisons (Roads), Ltd., Woking.
Building alterations—*E. H. Cummins & Co., Ltd., Dorking.
Heating installation—*W. N. Mann & Co., Folkestone.

East Grinstead.—Cottages, for the R.D.C. Mr. Chilton, architect, Uckfield:—

Forest Row and Hartfield—
*A. E. Guest, Ltd., Warlingham.
Worth (George-road)—
*H. J. Jenner, Three Bridges.
West Hoathly—
*R. Comber, West Hoathly.

Eastry.—For (*a*) four additional non-parlour houses at Eastry and (*b*) four at Ash, for the R.D.C.:—

(*a*) *Thompson & Son £1,446
(*b*) *J. W. Waller 1,672

Edenderry.—Eight two-storied four-roomed houses, for the Town Commissioners:—

M. Kelly £2,440
W. J. Hoey & Sons 2,249
*E. Dempsey, Carbury, Co. Kildare ... 2,144

Ellesmere Port.—Sewerage works, etc., for the U.D.C. Mr. A. H. S. Waters, engineer, 25, Temple-row, Birmingham:—

Contract No. 1—
*P. D. Hayes & Son, Stockport £27,258
Contract No. 2—
*P. D. Hayes & Son, Stockport 55,012

Farnham.—Further 24 houses at Ash, for the R.D.C.:—

*W. J. Holt.

Farnworth.—30 bungalows on Beatrice-street site, for the U.D.C. Mr. F. Ashton, engineer and surveyor:—

*C. W. Norris, Farnworth.

Gilmourton.—Reconstruction and additions to the school and schoolhouse. Mr. John Stewart, Master of Works Office, Albert-street, Motherwell:—

*John Aiton, Strathavon.

Glasgow.—Reconstruction and additions at wholesale drapery warehouse in Queen-street. Mr. J. Miller, F.R.I.B.A., architect, 15, Blythes Wood-square:—

*R. Murdoch & Son, 19, Maxwell-road, Queen's Park.

Glasgow.—Reconstruction of shops at West Nile-street. Mr. James Miller, architect, 15, Blythes Wood-square:—

*Thaw & Campbell, Ltd., 160, Paton-street, Bridgeton.

Glasgow.—New building at Kelvinside sports ground, for the Hillhead High School War Memorial Trust, Ltd. Messrs. William Hunter, McNab & Sons, architects, 121, West George-street, Glasgow:—

*Robert London, 80, King-street, Pollockshaws, Glasgow.

Greenock.—New dairy, bakery and restaurant, for Ross's Dairies, Ltd., Glasgow. Mr. Frank C. Petrie, architect, Library-buildings, Wallace-square:—

*Robert Rodgerston & Sons, Ltd., Balmoral-street, Scotstoun, Glasgow.
Plumber work—*Achd. C. Fletcher, Ltd., Greenock.

Gunnersbury.—Reconstruction of roof and repairs to workshop in the park, for the Gunnersbury Park Joint Committee. Mr. W. G. Cross, Engineer to the Committee, Town Hall, Acton:—

W. E. Heald, Brentford £539 10 0
P. C. Hudson, Acton 500 0 0
F. G. Cressy, Ltd., Chiswick 480 0 0
J. Exell & Son, London, W.1 ..... 469 4 6
R. Hewett, Acton 450 15 0
*H. Bennett, Ealing 319 15 0

Gurnard (Isle of Wight.—Alterations and additions to the Council school, for the Isle of Wight C.C. Mr. J. Dufton, County Clerk:—

*T. Westbrook & Son, Cowes £280

Halifax.—Widening of Salterhebble bridge, for the T.C.:—

*Z. & W. Wade, West-end, Halifax £6,082 5 9

Hartlemere.—Houses for the R.D.C.:—

Barton, 3 pairs—
*Brand, Haughley £2,160
Gislingham, 1 pair—
*Adams, Stanton 745
Mendlesham, 2 pairs—
*Elliott, Stowmarket 1,464
Occold, 1 pair—
*Seaman & Son, Stowmarket 725
Westhorpe, 3 pairs—
*Seaman & Son 2,220
Wortham, 1 pair—
*Adams, Stanton 750
Wyverstone, 2 pairs—
*Brand, Haughley 1,440
Yaxley, 1 pair—
*Jesse Smith & Son, Eye 725

Hebburn-on-Tyne.—Packing case factory at Messrs. Reyrolles electrical works. Messrs. Cackett & Burns Dick, architects, Ellison-place, Newcastle:—

*J. and W. Lowrie, Newcastle.
Steelwork—*Wright Anderson, Coulthard's-lane, Gateshead.

Hertford.—Internal decoration of 10 houses at the Camp Hill housing estate, for the T.C. Borough Engineer and Surveyor:—

A. P. C. Wray, Bengeo, Hertford £934 2 0
G. Collins, Hertford 757 5 0
H. Gomer, Bengeo, Hertford 627 0 6
A. J. Wick, Anstey, Buntingford 584 9 0
C. Pole, Hertford 565 0 0
Botsford & Wightman, Hertford 534 10 0
R. J. Butler, Newton Abbot 517 15 0
A. J. Cawley, Chelmsford 430 10 8
*Pole Bros., Hertford 342 13 6

Hertford.—Exterior painting of 134 houses on the Standstead-road housing estate, for the T.C. Borough Engineer and Surveyor:—

N. Harriss & Sons, London ... £1,940 0 0
W. George 1,206 0 0
E. Burns, Welwyn 568 2 6
R. J. Butler 536 0 0
G. Collins 507 7 8
Charles Pole 435 12 0
Pole Bros. 419 12 0
*Botsford & Wightman 327 7 0
(Remainder of Hertford.)

Houghton-le-Spring.—74 houses on the Villa estate, for the U.D.C.:—

‡F. W. Goodyear & Son £21,820

Hull.—Retaining wall, bridge and street works, etc., in connection with abolition of Whitefrairgate Bridge, for the T.C. Mr. H. Hamer, City Engineer. Quantities by the City Engineer:—

*H. Hill, St. Mary's chambers, Low-gate, Hull £12,149

Inverurie.—Various trades in connection with erection of houses in Harlaw-road and Port Elphinstone, for the T.C. Mr. J. Kellas, Town Clerk:—

*Geo. Duncan & Son, Inverurie ... £644 14 0
*John R. Craig, Kintore 319 14 3
*Albert Smith, Inverurie 156 13 0
*William Rhind, Inverurie 133 4 5

*Geo. Duncan & Son, Inverurie ... 619 10 0
*John R. Craig, Kintore 291 9 10
*James Laing & Sons, Inverurie ... 153 0 0
*Paul McPherson, Inverurie 109 19 2

Kells.—18 single-storied houses, for the U.D.C.:—

R. O'Neill, Leixlip £5,645
R. Martin (Martin Bros.), Nobber ... 5,289
McManus, Cavan 5,287
Philip O'Reilly, Moynalty 4,992
McEntaggart Bros., Nobber 4,983
Matthew Tevlin 4,922
Ennis Bros., Mullingar 4,842
M. Kelly, Tyrrell's Pass 4,653
*Andrew Doyle, Kells 4,162

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Kettering.—Alterations, etc., "Old White Horse" hotel, High-street, for Messrs. P. Phipps & Co. (Northampton & Towcester Breweries), Ltd., 8, Gold-street, Northampton:—

*A. G. Miller, Ltd., Tennyson-road, Kettering.

Kilrush.—Building, for the U.D.C.:—

*M. Barry £1,628

Kingsbridge.—6 parlour-type houses at Beesands, Stokenham, for R.D.C. Mr. Norman Harris, surveyor, 2, Knowle-terrace, Kingsbridge.

	Brick.	*Concrete blocks.*
H. Brooking, Chillington	£2,887	£2,958
E. Ferris, Stokefleming	2,583	2,597
Phillips, Berry & Co., Kingsbridge	2,520	2,498
D. Horsman, Buckfastleigh	2,400	2,388
*J. Camp-Scoble, Knightsbridge	*2,368	2,388

Kingston-upon-Hull.—Tramway shelter, for the T.C.:—

*City Engineer.

Kingswood.—Public convenience and mortuary, for the U.D.C. Mr. G. Fletcher, surveyor:—

R. Clark £1,567 0 0
H. Willis, Kingswood 1,503 0 0
Hayes 1,494 0 0
F. Wilkins 1,468 0 0
R. Wilkins 1,444 0 0
Britton 1,438 0 0
W. J. Hembrough, Warmley ... 1,365 0 0
H. Willmott, Kingswood 1,350 0 0
Cooper 1,338 8 10
*Ayres & Son, Forest-road, Kingswood 1,155 15 4
(Remainder of Bristol.)

Lancaster.—New offices at Lune Mills, for Messrs. John Williamson & Son, St. George's Works. Messrs. S. Fairhurst & Son. F. & A.R.I.B.A., architects, Chancery-chambers, 55, Brown-street, Manchester:—

Builders—*R. Thompson & Morris, Lancaster.
Steelwork—*John Booth & Sons, Ltd., Bolton.

Lancaster.—(1) Reconstruction of Damas Gill-bridge; (2) widening of Cowford-bridge; and (3) widening of Tarnbrick railway bridge, for the C.C. Mr. Peter Schofield, County Surveyor, Preston:—

(1) *T. Croft & Son, Preston.
(2) *J. M. Firth & Sons, Todmorden.
(3) *Morrison & Sons, Ltd., Liverpool.

Lancaster.—Reservoir at Langthwaite, for the T.C. Messrs. James Mansergh & Sons, consulting engineers, London. Mr. Frederick Hill, Borough Surveyor:—

*Direct Administration £260,000

Leeds.—Elementary school buildings at Thorpe-road, Middleton, for the E.C. Mr. Broadbent, architect:—

*W. J. & R. Turnbull.

Leeds.—Reconstruction of shop premises in New Market buildings fronting Kirkgate:—

*Gilbart Bros.

Leeds.—Garage, showrooms and workshop fronting Melbourne-street off North-street:—

*B. Whittaker.

Leeds.—Demolition of existing building and rebuilding of the "White Stag" hotel in Whitelock-street, off North-street, for Messrs. Joshua Tetley & Sons, Ltd., The Brewery, Leeds. Messrs. Kitson, Parish, Ledgard & Pyman, architects, Lloyd's Bank-chambers, Vicar-lane:—

Builder—*B. Coates & Son, Ltd.
Joiner—*Banks Mawson.
Plumber and bar fitter—*W. T. Simpson, Ltd.

Leicester.—New service reservoir to improve the supply of water to the higher parts of Leicester:—

*Yorkshire Hennebique Contracting Co., Ltd., Leeds.

Leighton Buzzard.—Eight houses in St. Andrew's street:—

Heels & Sugars, Luton £2,995
Ernest Pryer, Luton 2,896
Exors. A. E. Dawson, Leighton Buzzard 2,880
Griffiths Building Contractors, Ltd., Sudbury, Wembley 2,798
H. Branton, Leighton Buzzard 2,747
*W. G. Willis & Sons, Leighton Buzzard 2,568

Leytonstone.—Alterations and additions to Tom Hood central school, Cobbold-road, for the Leyton Corporation. Messrs. J. T. Newman & Jacques, architects:—

A. A. Webber, Ltd., London £14,271
J. & J. Dean, Leyton 14,215
W. Shurmur & Sons, Ltd., Upper Clapton 14,195
Stanley & Sons, Leytonstone 13,958
A. Bedford, Palmers Green 13,742
J. & R. Rooff, Ltd., Plaistow 13,666
J. Sands, Walthamstow 13,620
H. C. Horswill, Ltd., Forest Gate ... 13,460
Hammond & Barr, Ltd., Chelsea ... 13,395
W. J. Clemens, Stratford 13,280
J. T. Luton & Son, Ltd., Stratford 13,209
F. J. Coxhead, Leytonstone 13,156
Hammond & Miles, Ltd., Ilford 13,138
E. A. Russell, Ltd., Walthamstow ... 12,950
*A. E. Symes, Ltd., Stratford 12,947

Lewes.—48 non-parlour type houses and appurtenant works at North Way and Cross Way, Nevill estate, for the T.C. Mr. C. T. Butler, Borough Surveyor :—

	Contract No. 2 (18 houses).	*Contract No. 3 (30 houses).*
J. Bodle, Ltd., Eastbourne ...	£9,360	£14,637
A. E. Guest, Ltd., London.....	8,080	13,954
H. J. Hubble, Tonbridge	7,740	13,361
C. Pannett & Son, Ltd., Lewes	7,782	13,334
A. Saunders, Brighton	7,695	12,975
*W. H. Green & Sons, Old Shoreham-road, Portslade ...	7,484	12,127

Liverpool.—Additional floor be added to the dwellings to be erected at Calvin-street and Burnet-street, for the T.C. :—
*J. Lewis, of 13a, Laurel-road, Fairfield, Liverpool £2,160

Llangynwyd.—Repairs to tower of the church to cure dampness, for the P.C. Mr. D. Thomas, secretary to Parochial Council. Mr. E. J. E. Moore, A.R.I.B.A., chartered architect, Commerce-chambers, John-street, Porthcawl :—
*O. E. Jones & Co., Maesteg Saw Mills, Maesteg, Glam.

London.—Works contracts placed by the War Office for the week ended April 1 :—
Woolwich, Shrapnel Barracks—alterations and additions to provide dental centre—W. F. Blay, Ltd., Dartford.
Shorncliffe and Dover—artificers' work—G. Lewis & Sons, Ltd., Dover.
Newcastle-on-Tyne—artificers' work—G. R. Wade & Son, Richmond, Yorks.

London.—Tenders accepted by H.M. Air Ministry for the week ending March 28 :—
Gosport—builder's works to compressor, shops, etc.—J. Hunt, Ltd., South Wharf, Cleveland-road, Gosport.
Biggin Hill—underground cables—F. Dixon & Sons, 100, Victoria-street, S.W.1.

London.—Tenders accepted by H.M.O.W. :—
Edinburgh District—joinery work—W. & J. R. Watson, Ltd., 48, Iona-street, Edinburgh.
G.P.O. South—steelwork—Wilfred Robbins, Ltd., Golds Hill Ironworks, Gt. Bridge, Staffs.
Natural History Museum—W.I. railings and hand-rails, etc.—G. Johnson Brothers, 69, Old-street, E.C.
Natural History Museum—bronze laylights, grilles, etc.—Geo. Wragge, Ltd., Clock House, Arundel-street.
Hollinwood H.M.S.O.—new roads—T. Coates (1927), Ltd., Victoria-buildings, Silver-street, Bury.
Heddon Street B.P.O.—alterations—Wm. Whiteley, Ltd., Queen's-road, W.2.
Greenwich, H.M.F.R.S.—erection of a new story over laboratories—J. Smith & Sons (Norwood), Ltd., Junction Works, Norwood, S.E.25.
Natural History Museum—lantern lights and patent glazing—Helliwell & Co., Ltd., 63, Victoria-street, Westminster, S.W.1.

London.—Slating the roof and supply of stonework for the New Eltham Library, for the Woolwich B.C. :—
Slating—
*J. G. Tuxford £311 18 4
Stonework—
*Emerson & Norris, Ltd. 845 17 0

London.—Rebuilding the front wall of Nos. 7 and 9, Godliman-street, for the City Corporation :—
*F. J. Howard £1,033
(In lieu of tender withdrawn.)

Loughrea.—Rebuilding of Loughrea Town Hall :—
*McNally & Co. £5,996

Macclesfield.—Laying of about 3,200 yds. of 6-in. cast-iron water mains along highway between Alderley Edge and Prestbury, with hydrants, sluice valves and other fittings, for the R.D.C. Mr. J. Thorpe, 19, King Edward-street :—
*F. G. V. Freeman, Hollinwood, Lancashire £698

Manchester.—Scouts' hall off Avon-road, Burnage, for the Burnage Group 190, Manchester Scouts :—
*J. T. Jackson, Manchester.

Manchester.—Additions to the rectory, 31, Devonshire-street, Ardwick, for St. Matthew's. Mr. R. Martin, L.R.I.B.A., diocesan surveyor, 90, Deansgate :—
*R. Heyworth & Co., Manchester.

Manchester.—Alterations to premises at 40 and 42, Great Ancoats-street, for Mr. C. H. Zethners :—
*E. Bradbury & Sons, Ltd., Manchester.

Manchester.—Shop front to premises, Waterloo-road, Cheetham, for Mr. S. Moss. Mr. E. Timewell, architect :—
*H. Pollick, Manchester.

Manchester.—25 houses in Hurstville-road and Redland-crescent, Chorlton :—
*J. T. Scott, Manchester.

Manchester.—Alterations and additions to the "Oaks Hotel," Barlow Moor-road, Chorlton-cum-Hardy, for Messrs. Wilson's Brewery, Ltd., Monsall-road Brewery, Newton Heath. Mr. E. W. Highfield, resident architect :—
*Own Building Staff, Newton Heath.

Manchester.—Billiard hall in Hyde-road and Dolphin-street, Ardwick, for Messrs. E. J. Riley, Ltd., Dale-street, Accrington. Mr. F. Hearne, A.R.I.B.A., architect, 42, Deansgate :—
*W. Gornall & Sons, Ltd., Bolton.
(Estimated cost, £20,000.)

Manchester.—Buildings for the Cancer Hospital, Wilmslow-road, Withington, for Board of Management. Mr. H. S. Fairhurst, F.R.I.B.A., architect, Chancery-chambers, 55, Brown-street :—
Builders—*Wm. Thorpe & Sons, Ltd., Manchester.
Plumbing—*J. Jaffrey & Co., Manchester.
Plastering—*W. J. Roberts, Manchester.
Masonry—*Mather & Ellis, Hulme.
Patent stone—*Concrete Unit Co., Ltd., Trafford Park.
Steelwork—*Banister Walton & Co., Ltd., Trafford Park.
Concrete floors—*Fram Reinforced Concrete Co., Ltd., Manchester.

Manchester.—Garage and van store, North-road, Clayton, for the Mayfield Dairy Co., Ltd., 4, Garner-street, North-road, Clayton. Mr. A. J. Hoyland, L.R.I.B.A., architect, 32, King-street West :—
Builders—*J. Riley & Sons, Manchester.
Steelwork—*Joseph Parks & Sons, Ltd., Northwich.

Market Bosworth.—20 parlour-type houses at Ibstock, for the R.D.C. Mr. H. G. Davey, surveyor, Market Bosworth :—

J. R. Cook & Co., Broughton Astley	£8,280
Griffin Bros., Coalville	8,140
Rogers & Co., Coalville	7,930
Orton & Dally, Coalville	7,896
Geo. Cooper & Co., Nuneaton	7,500
J. Hawes & Sons, Wigston	7,350
Gurney & Co., Leicester	7,307
Chapman & Sons, Markfield	7,200
E. J. Cox & Sons, Leicester	7,200
Tubey & Co., Burton-on-Trent	7,150
Otley & Clegg, Leicester	6,975
*T. G. Lee, Stoke Golding	6,900

New Ross.—Diversion of a water main at Ballyanne and construction of pipe sewers, for the U.D.C. Mr. James S. Barry, Town Clerk :—
*Rd. Noland, Waterford £1,695

Newcastle-on-Tyne.—Alterations and extensions to the premises of Auto Garages (Northern), Ltd., 121, Northumberland-street :—
*Ferguson & Sons, Newcastle.

Newcastle-on-Tyne.—Extensions to the premises, in Market-street, for Messrs. Bainbridge & Co. Mr. J. Walton Taylor, architect, St. John-street :—
*F. J. Hepple, Dunn-street, Newcastle.

Newcastle-on-Tyne.—Building work at (*a*) Sandyford-road school; (*b*) Raby-street school, and (*c*) North Heaton school, for the E.C. :—

(*a*)—*G. G. Carr	£12,813
(*b*)—*T. Curry & Sons	11,527
(*c*)—*S. Miller, Ltd.	7,999

Portlaoighise.—Central heating system for the institution, for the District Hospital Joint Committee :—
*Brightside Foundry & Engineering Co., Liverpool £8,353

Redcar.—100 houses of the non-parlour type, and 50 of the parlour type, for the T.C. :—

	Per house
*G. T. Potts, 8, Hawthorne-road, Redcar	£245
*Croskell & Sons, 5, Greenlands-road, Redcar	296

Romford.—12 houses at Cranham, for the R.D.C. :—
*Pavitt Bros., Ltd. £4,140

Rotherham.—12 houses at Bramley and 20 houses at Thurcroft, for the R.D.C. :—
*H. Godley, Bramley £10,182

Rotherham.—12 houses at Dalton and 16 at Thrybergh, for the R.D.C. :—
*W. Thomason, Ltd., Thrybergh £8,168

Rotherham.—Golf club house on Sitwell-park, for the Committee of Sitwell Park Golf Club. Mr. David B. Jenkinson, A.R.I.B.A., architect, Imperial-buildings, High-street :—
*Melling Bros., Ltd., Sheffield.

Rotherham.—46 houses, recreation and reading room for aged persons on Herringthorpe Estate, for the T.C. Mr. Vincent Turner, Borough Engineer :—
*Direct Labour £10,580

Royston.—Percolating filter, pump house and pump well, caretaker's house, etc., for the U.D.C. Mr. W. T. Lynam, A.M.I.C.E., Market-chambers, Hemsworth :—
*Royston Builders and Contractors, Royston, near Barnsley.

Saddleworth.—Conversion of 500 pail closets into fresh water closets, for the U.D.C. Mr. J. H. Reynolds, surveyor. Mr. L. Taylor, Sanitary Inspector :—
*R. W Norton & Son, Oldham.

St. Albans.—34 houses on the London Colney extended site, for the R.D.C. :—
*Smith Bros, Wheathampstead £12,750
Electric light, etc.—
*North Metropolitan Electric Power Supply Co. 507

Sawbridgeworth.—20 houses in West-road, for the U.D.C. Mr. W. Morris, Clerk :—

J. L. Glasscock's Successors, Bishops Stortford	£8,184
Bennett Bros., Letchworth	7,648
W. G. Parker, Ongar	7,042
T. Harris & Sons, Dunmow	6,876
H. G. Acres, Shelley, Ongar	6,880
*N. J. Lawrence, Sawbridgeworth ...	6,750

Shawburn.—Erection of Shawburn primary school extension. Mr. John Stewart, architect, Master of Works Office, Albert-street, Motherwell :—
Excavation, bricks, etc., works—*J. Aiton, Strathavon.
Carpentry, joiner and glazier works, etc.—*Allan Thomson, Larkhall.
Plumber work—*Duncan Johnstone, Strathavon.
Slater and roughcast work—*Angus Park & Sons, Strathavon.
Plaster work—*Shearer & Crawford, Stonehouse.
Tile work—*John McCarron, Wishaw.

Sheffield.—528 houses on the Shiregreen estate, for the City Council :—
*M. J. Gleeson, Ltd. £198,698

Skelton.—Pithead baths at Deep Colliery, near Stoke-on-Trent :—
*J. Craven, 439, Westgate-road, Newcastle.

Southampton.—Alterations and additions to West End institution, for the C.B. :—

H. Stevens & Co., Ltd.	£1,120 0
H. Cawte & Son, Ltd.	1,050 0
Hales Bros.	1,042 0
Brazier & Son, Ltd.	989 0
A. E. Jukes & Son, Ltd.	989 0
J. J. Udall's Building Co., Ltd. ...	924 10
*Rawlings & Knowles	780 0

Stockport.—Taking down of boundary wall, etc., to "Beaconsfield," Bramhall-lane, and rebuilding same, for the Corporation. Mr. Herbert Hamer, Borough Surveyor :—
*Briggs & Co., Stockport.

Swansea.—94 houses on the Townhill site, for the C.B. :—
*L. H. Samuel, West Cross, Swansea £33,206 17 3

Swansea.—58 houses on the Townhill estate, for the C.B. :—
*L. H. Samuel, West Cross, Swansea £20,141 13 4

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Tendring.—Pair cottage houses and alteration to the boys' home, for the Essex C.C.:—
*Appleton & Sons, Colchester £4,960

Twickenham.—New sewer between Station-road and the sewage disposal works, for the T.C.:—
*Willment Bros. £25,650 3 9

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Teddington.—Installation of filtration plant for a proposed open-air swimming-bath, for the U.D.C. Mr. H. C. Hunt, architect, 38, Parliament-street, Westminster, S.W.1:—

Scott & Hodgson, Ltd.	£1,630
Candy Filter Co., Hanwell	1,610
Pulsometer Eng. Co.	1,603
Bell Bros., Ltd., Manchester	1,538
United Filters, Ltd.	1,477
Royles, Ltd., Irlam	1,325
Turn-over Filter Co., Belfast	1,320
Paterson Engineering Co.	1,320
Norris Warming Co.	1,158

(Remainder of London.)

Ware.—50 houses, for the R.D.C. Mr. L. J. Dale, surveyor, 48, Rye-road, Hoddesdon:—
*W. G. Parker, High Ongar, Essex ... £9,275

Warmley.—Twelve houses in Mangotsfield-lane, for R.D.C.:—
*H. & J. Lemon, Westerleigh ... £341 each

Wealdstone.—Concrete culvert to the brookcourse from the Kenton recreation ground to Becmead-avenue, for the U.D.C.:—
*T. F. Nash, Ltd. £434 16

West Ham.—New latrines on the roof playground of Bridge-road school, for the C.B.:—
*J. & R. Rooff, Ltd. £248 10

Whitby.—Conversions of beach shelter into new public conveniences, for the U.D.C. Mr. J. R. Seward, engineer and surveyor:—

A. Palframan & Son	£245 19 6
J. R. Tesseyman	237 11 6
C. R. Gamble	228 12 6
J. Kidd & Son	225 15 0
C. Watmough	221 7 6
*John Jackson & Co., West End Rooms	215 0 0

(All of Whitby.)

Ystradgynlais.—38 houses at Bryn-road, Ystradgynlais, and 10 houses at Colbren, for the R.D.C. Mr. W. Edgar Evans, architect, 29, Gurnos-road, Ystalyfera:—

Bryn-road—	
J. E. Jones, Portllanfraith	£17,793
Lawford Gower, Britonferry	17,706
G. M. Jones, Ystradgynlais	16,676
Weaver Bros., Swansea	16,665
T. Jenkins, Blaengarw	16,548
I. John, Port Talbot	16,283
T. J. Williams, Cwmllynfell	16,127
‡Hopkin & Evans, Ystalyfera	15,953
J. Morgan, Neath	15,886
Howell & Burgess, Kenfig Hill	15,741
Colbren site—	
J. E. Jones, Portllanfraith	4,934
Humphreys, Glyneath	4,748
Weaver Bros., Swansea	4,730
Lawford Gower, Britonferry	4,682
G. M. Jones, Ystradgynlais	4,655
Howell & Burgess, Kenfig Hill	4,608
‡John Morgan, Neath	4,329

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Wimbledon.—Greenhouse at the Central Nursery, for the B.C.:—
*Duncan Tucker (Tottenham), Ltd., Tottenham, N.15 ..... £242 10

York.—Block of almshouses to be styled "John Burvill's Homes." Messrs. Ward & Leckenby, architects, Museum-street:—
*Wm. Birch & Sons, Ltd.

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